

FCC Radio Test Report					
	FCC ID: V7TA9				
This report concerns (check on	e): ⊠Original Grant				
Equipment : W Model Name : A Applicant : S Address : 6-	606C194 /ireless N300 Universal Range Extender 9 HENZHEN TENDA TECHNOLOGY CO.,LTD. -8 Floor, Tower E3, No. 1001, Zhongshanyuan oad, Nanshan District, Shenzhen, China. 518052				
Date of Test : Ju Issued Date : Ju	un. 15, 2016 un. 15, 2016 ~ Jul. 07, 2016 ul. 08, 2016 TL Inc.				
Testing Engineer	: <u>Shawn Xiao</u> (Shawn Xiao) David Mao				
Technical Manager	: David Mao (David Mao)				
Authorized Signatory	: Seen Lu)				
BTL INC. No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China. TEL: +86-769-8318-3000 FAX: +86-769-8319-6000					



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Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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REPORT ISSUED HISTORY

Issued No.	Description	Issued Date	
BTL-FCCP-1-1606C194	Original Issue.	Jul. 08, 2016	



1. CERTIFICATION

Equipment : Brand Name : Model Name :	
Applicant :	SHENZHEN TENDA TECHNOLOGY CO.,LTD.
Manufacturer :	SHENZHEN TENDA TECHNOLOGY CO., LTD.
Address :	6-8 Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052
Date of Test :	Jun. 15, 2016 ~ Jul. 07, 2016
Test Sample :	Engineering Sample
Standard(s) :	FCC Part15, Subpart C:(15.247) / ANSI C63.10-2013

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-1-1606C194) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

Applied Standard(s): FCC Part15 (15.247) , Subpart C					
Standard(s) Section	Test Item	Judgment	Remark		
15.207	Conducted Emission	PASS			
15.247(d)	Antenna conducted Spurious Emission	PASS			
15.247(a)(2)	6dB Bandwidth	PASS			
15.247(b)(3)	Peak Output Power	PASS			
15.247(e)	Power Spectral Density	PASS			
15.203	Antenna Requirement	PASS			
15.209/15.205	Transmitter Radiated Emissions	PASS			

NOTE:

(1)" N/A" denotes test is not applicable in this test report.



2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China. BTL's test firm number for FCC: 319330

2.2 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. The BTL measurement uncertainty is less than the CISPR 16-4-2 U_{cispr} requirement.

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

A. Conducted Measurement:

Test Site	Method	Measurement Frequency Range	U, (dB)
DG-C02	CISPR	150 KHz ~ 30MHz	2.32

B. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)												
		9KHz~30MHz	V	3.79												
		9KHz~30MHz	Н	3.57												
		30MHz ~ 200MHz	V	3.82												
	3 CISPR		30MHz ~ 200MHz	Н	3.78											
DG-CB03			200MHz ~ 1,000MHz	V	4.10											
DG-CB03		200MHz ~ 1,000MHz	Н	4.06												
		1GHz~18GHz	V	3.12												
														1GHz~18GHz	Н	3.68
		18GHz~40GHz	V	4.15												
		18GHz~40GHz	Н	4.14												

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless N300 Universal Range Extender		
Brand Name	Tenda		
Model Name	A9		
Model Difference	N/A		
	Operation Frequency	2412~2462 MHz	
	Modulation Technology	802.11b:DSSS 802.11g:OFDM 802.11n:OFDM	
Product Description	Bit Rate of Transmitter	802.11b: 11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6 Mbps 802.11n up to 300 Mbps	
	Output Power (Max.)	802.11b: 18.66dBm 802.11g: 25.87dBm 802.11n(20MHz): 29.27dBm 802.11n(40MHz): 27.37dBm	
Power Source	AC Mains		
Power Rating	I/P: AC 100-240V 50/60Hz 0.3A		

Note:

- 1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- 2. Channel List:

	CH01 – CH11 for 802.11b, 802.11g, 802.11n(20MHz) CH03 – CH09 for 802.11n(40MHz)						
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		



3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	Tenda	N/A	Dipole	N/A	3
2	Tenda	N/A	Dipole	N/A	3

Note:

(1) The EUT incorporates a MIMO function. Physically, the EUT provides two completed two transmitters and two receivers (2T2R). All transmit signals are completely uncorrelated, then, **Directional gain=G**_{ANT}, that is Directional gain=3.

4.

Operating Mode TX Mode	1TX	2ТХ
802.11b	V (ANT 1 or ANT 2)	-
802.11g	V (ANT 1 or ANT 2)	-
802.11n(20MHz)	-	V (ANT 1 + ANT 2)
802.11n(40MHz)	-	V (ANT 1 + ANT 2)

3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	TX B MODE CHANNEL 01/06/11
Mode 2	TX G MODE CHANNEL 01/06/11
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09
Mode 5	TX MODE

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

	For Conducted Test
Final Test Mode	Description
Mode 5	TX MODE

For Radiated Test		
Final Test Mode	Description	
Mode 1	TX B MODE CHANNEL 01/06/11	
Mode 2	TX G MODE CHANNEL 01/06/11	
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11	
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09	

Note:

(1) The measurements are performed at the high, middle, low available channels.

- (2) 802.11b mode: DBPSK (1Mbps) 802.11g mode: OFDM (6Mbps) 802.11n HT20 mode : BPSK (13Mbps) 802.11n HT40 mode : BPSK (27Mbps) For radiated emission tests, the highest output powers were set for final test.
 (3) For radiated below 1G test, the 802.11b is found to be the worst case and recorded.
- (4) The EUT was programmed to be in continuously transmitting mode and the transmit duty cycle is not less than 98%.



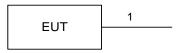
3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of WLAN

Test software version		N/A	
Frequency (MHz)	2412	2437	2462
802.11b	33	34	37
802.11g	49	49	48
802.11n (20MHz)	49	53	48
Frequency	2422	2437	2452
802.11n (40MHz)	48	50	40



3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.5 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.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.
-	-	-	-	-	-

Item	Shielded Type	Ferrite Core	Length	Note
1	N/A	N/A	1.5M	RJ-45 Cable



4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION LIMITS (Frequency Range 150KHz-30MHz)

Frequency of Emission (MHz)	Conducted Limit (dBµV)	
Frequency of Emission (MHz)	Quasi-peak	Average
0.15 -0.50	66 to 56*	56 to 46*
0.50 -5.0	56	46
5.0 -30.0	60	50

Note:

- (1) The limit of " * " decreases with the logarithm of the frequency
- (2) The test result calculated as following:
 - Measurement Value = Reading Level + Correct Factor
 - Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)
 - Margin Level = Measurement Value Limit Value

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

4.1.2 TEST PROCEDURE

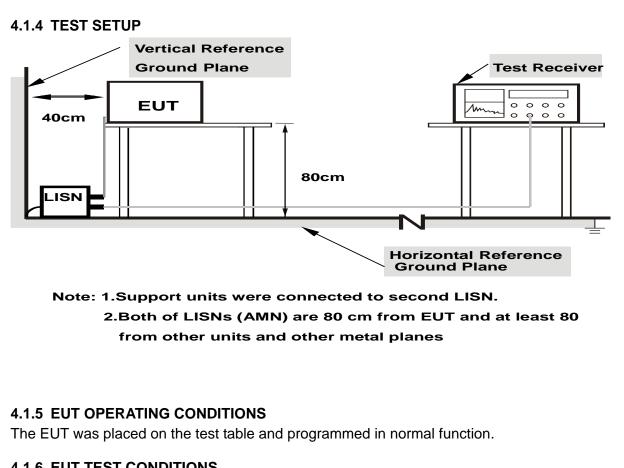
- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation







4.1.6 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

4.1.7 TEST RESULTS

Please refer to the Attachment A.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS

In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (9KHz-1000MHz)

Frequency	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(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
960~1000	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

Frequency (MHz)	(dBuV/m) (at 3 meters)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

- (3) Emission level (dBuV/m)=20log Emission level (uV/m).
- (4) The test result calculated as following: Measurement Value = Reading Level + Correct Factor Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use) Margin Level = Measurement Value - Limit Value

Spectrum Parameter	Setting	
Attenuation	Auto	
Start Frequency	1000 MHz	
Stop Frequency	10th carrier harmonic	
RBW / VBW	1MHz / 3MHz for Peak,	
(Emission in restricted band)	1MHz / 1/T for Average	



Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9KHz~90KHz for PK/AVG detector
Start ~ Stop Frequency	90KHz~110KHz for QP detector
Start ~ Stop Frequency	110KHz~490KHz for PK/AVG detector
Start ~ Stop Frequency	490KHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

4.2.2 TEST PROCEDURE

- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. 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 find the maximum reading (used Bore sight function).
- e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
- f. The initial step in collecting conducted emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (below 1GHz)
- All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1GHz)
- i. For the actual test configuration, please refer to the related Item -EUT Test Photos.

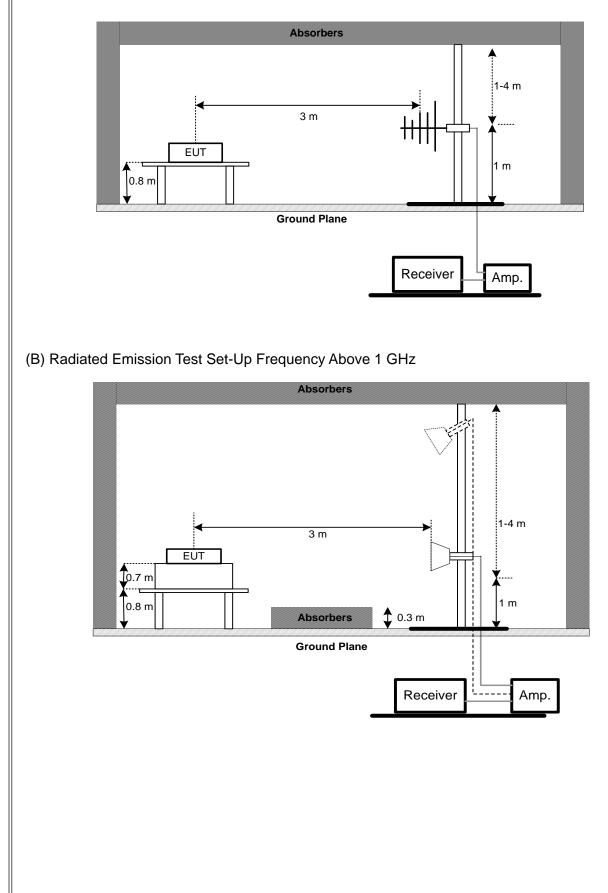
4.2.3 DEVIATION FROM TEST STANDARD

No deviation



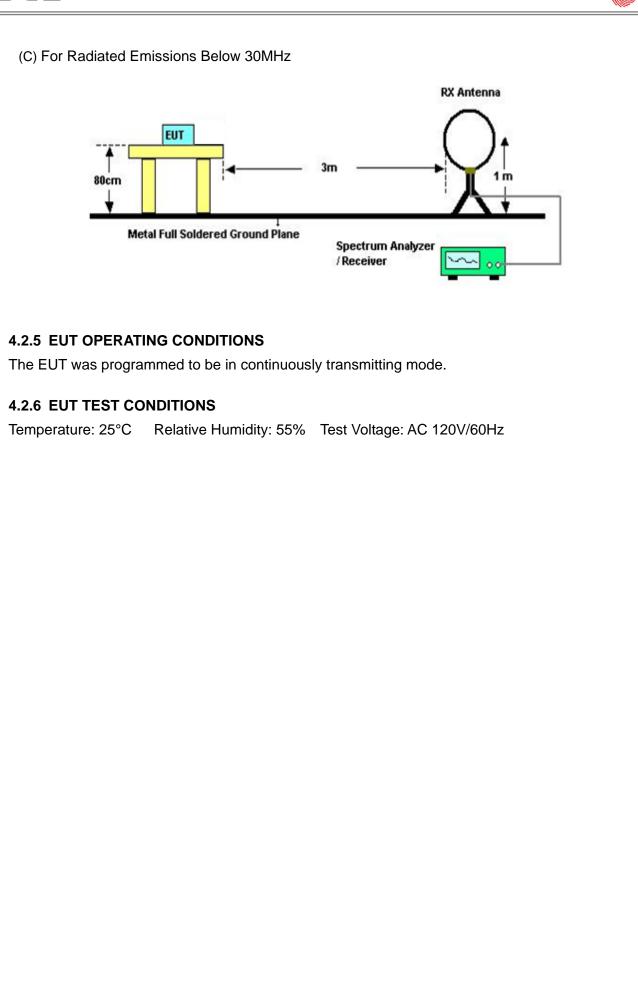
4.2.4 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz











4.2.7 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Attachment B

Remark:

- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
- (2) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.

4.2.8 TEST RESULTS (30MHZ TO 1000 MHZ)

Please refer to the Attachment C.

4.2.9 TEST RESULTS (ABOVE 1000 MHZ)

Please refer to the Attachment D.

Remark:

(1) No limit: This is fundamental signal, the judgment is not applicable. For fundamental signal judgment was referred to Peak output test.



5. BANDWIDTH TEST

5.1 APPLIED PROCEDURES

FCC Part15 (15.247), Subpart C				
Section	Frequency Range (MHz)	Result		
15.247(a)(2)	Bandwidth	2400-2483.5	PASS	

5.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = 2.5 ms.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP

EUT	SPECTRUM
	ANALYZER

5.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

5.1.6 TEST RESULTS

Please refer to the Attachment E.



6. MAXIMUM PEAK CONDUCTED OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

	FCC Part15 (15.247) , Subpart C					
Section	Test Item	Limit	Frequency Range (MHz)	Result		
15.247(b)(3)	Maximum Output Power	1 Watt or 30dBm	2400-2483.5	PASS		

6.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,
- b. The maximum peak conducted output power was performed in accordance with method 9.1.2 of FCC KDB 558074 D01 DTS Meas Guidance v03r05 and FCC KDB 662911 D01 Multiple Transmitter Output v02r01.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP

Power Meter

6.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

6.1.6 TEST RESULTS

Please refer to the Attachment F.



7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 APPLIED PROCEDURES / LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits.

7.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = Auto.
- c. Offset=antenna gain+cable loss

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



7.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

7.1.6 TEST RESULTS

Please refer to the Attachment G.



8. POWER SPECTRAL DENSITY TEST

8.1 APPLIED PROCEDURES / LIMIT

	FCC Part15 (15.247), Subpart C					
Section	Test Item	Limit	Frequency Range (MHz)	Result		
15.247(e)	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS		

8.1.1 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW=3KHz, VBW=10KHz, Sweep time = Auto.

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP

EUT	SPECTRUM
	ANALYZER

8.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

8.1.6 TEST RESULTS

Please refer to the Attachment H.



9. MEASUREMENT INSTRUMENTS LIST

	Conducted Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	LISN	EMCO	3816/2	0052765	Mar. 27, 2017	
2	LISN	R&S	ENV216	101447	Mar. 27, 2017	
3	Test Cable	emci	RG223(9KHz -30MHz)	C_17	Mar. 10, 2017	
4	EMI Test Receiver	R&S	ESCI	100382	Mar. 27, 2017	
5	50Ω Terminator	SHX	TF2-3G-A	08122901	Mar. 27, 2017	
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1 -01	N/A	N/A	

	Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Antenna	Schwarbeck	VULB9160	9160-3232	Mar. 27, 2017	
2	Amplifier	HP	8447D	2944A09673	Nov. 09, 2016	
3	Receiver	AGILENT	N9038A	MY5213003 9	Oct. 11, 2016	
4	Test Cable	emci	LMR-400(30MH z-1GHz)	C-01	Jun. 27, 2017	
5	Control	СТ	SC100	N/A	N/A	
6	Position Control	MF	MF-7802	MF78020841 6	N/A	
7	Antenna	ETS	3115	00075789	Mar. 27, 2017	
8	Amplifier	Agilent	8449B	3008A02274	Nov. 01, 2016	
9	Receiver	AGILENT	N9038A	MY5213003 9	Oct. 11, 2016	
10	Test Cable	emci	EMC104-SM-S M-10000(1GHz - 26.5GHz)	C-68	Jun. 27, 2017	
11	Controller	СТ	SC100	N/A	N/A	
12	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Apr. 23, 2017	
13	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 27, 2017	
14	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Sep. 07, 2016	
15	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A	



	6dB Bandwidth Measurement				
ltem	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EXA Spectrum Analyzer	Agilent	N9010A	MY50520044	Mar. 27, 2017

Peak Output Power Measurement					
ltem	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	power Meter	ANRITSU	ML2495A	1128009	Apr. 26, 2017
2	Pulse Power Sensor	ANRITSU	MA 2411B	1027500	Apr. 26, 2017

	Antenna Conducted Spurious Emission Measurement				
ltem	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EXA Spectrum Analyzer	Agilent	N9010A	MY50520044	Mar. 27, 2017

	Power Spectral Density Measurement					
ltem	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	EXA Spectrum Analyzer	Agilent	N9010A	MY50520044	Mar. 27, 2017	

Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of equipment list is one year.



10. EUT TEST PHOTO

Conducted Measurement Photos



















ATTACHMENT A - CONDUCTED EMISSION





Test Mode : TX MODE Line 80 dBuV 2 3 40 4 6 will de als more manufactures and 0 0.15 0.50 1.00 5.00 10.00 30.00(MHz) Reading Correct Measure No. Freq. Limit Margin Level Factor ment MHz dBuV dB dB Comment dBu¥ dBu¥ Detector 0.1582 37.94 9.52 47.46 65.56 -18. 10 1 Peak 2 0.2380 34.21 9.53 43.74 62.17 -18.43 Peak 3* 0.5460 31.91 9.64 41.55 56.00 -14.45 Peak 1.8140 22.87 9.88 32.75 56.00 -23.25 Peak 4 10.16 4.1420 22.86 33.02 -22. 98 5 56.00 Peak 7.4060 10.16 -27.57 6 22.27 32.43 60.00 Peak





Test Mode : TX MODE Neutral 80 dBuV 2 3 40 6 ×. my logal who happe mulil 0 0.15 0.50 1.00 5.00 10.00 30.00(MHz) Reading Correct Measure No. Freq. Limit Margin Level Factor ment MHz dBuV dB dBu¥ dB Detector Comment dBu¥ -20.66 0.1548 35.58 9.50 45.08 65.74 1 Peak 2 0.2340 31.61 9.53 41.14 62.31 -21.17 Peak 3* 0.5700 -14.59 31.97 9.44 41.41 56.00 Peak 1.2660 25.67 9.67 35.34 56.00 -20.66 Peak 4 31.72 2.6500 21.93 9.79 56.00 -24. 28 5 Peak 7.6020 10.03 33.97 60.00 -26.03 6 23.94 Peak



ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ)





Test Mode:

0.0249

0.0249

0.0431

0.0431

0.0574

0.0574

0.6233

2.0538

90°

90°

90°

90°

90°

90°

90°

90°

7.36

8.23

5.39

6.25

1.66

2.29

22.08

24.35

TX B MODE CHANNEL 01

	-						
Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Note
				, , , , , , , , , , , , , , , , , , ,	· · ·		
0.0114	0°	13.35	24.8447	38.1947	126.4661	-88.2715	AVG
0.0114	0°	14.22	24.8447	39.0647	146.4661	-107.4015	PEAK
0.0263	0°	6.91	23.9010	30.8110	119.2051	-88.3941	AVG
0.0263	0°	8.64	23.9010	32.5410	139.2051	-106.6641	PEAK
0.0379	0°	3.87	23.1663	27.0363	116.0314	-88.9951	AVG
0.0379	0°	5.61	23.1663	28.7763	136.0314	-107.2551	PEAK
0.0525	0°	1.72	22.3500	24.0700	113.2010	-89.1310	AVG
0.0525	0°	2.57	22.3500	24.9200	133.2010	-108.2810	PEAK
0.5174	0°	19.79	19.8557	39.6457	73.3277	-33.6820	QP
1.9592	0°	23.04	19.5041	42.5441	69.5400	-26.9959	QP
	1	ſ		Ι			
Frequency	Ant	Read level	Factor	Measured(FS)	Limit	Margin	Note
(MHz)	0°/90°	dBuV/m	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
0.0127	90°	13.42	24.3000	37.7200	125.5282	-87.8082	AVG
0.0127	90°	14.61	24.3000	38.9100	145.5282	-106.6182	PEAK

23.9897

23.9897

22.8370

22.8370

22.2520

22.2520

20.1946

19.4677

31.3497

32.2197

28.2270

29.0870

23.9120

24.5420

42.2746

43.8177

119.6802

139.6802

114.9147

134.9147

112.4260

132.4260

71.7103

69.5400

-88.3306

-107.4606

-86.6877

-105.8277

-88.5140

-107.8840

-29.4357

-25.7223

AVG

PEAK

AVG

PEAK

AVG

PEAK

QP

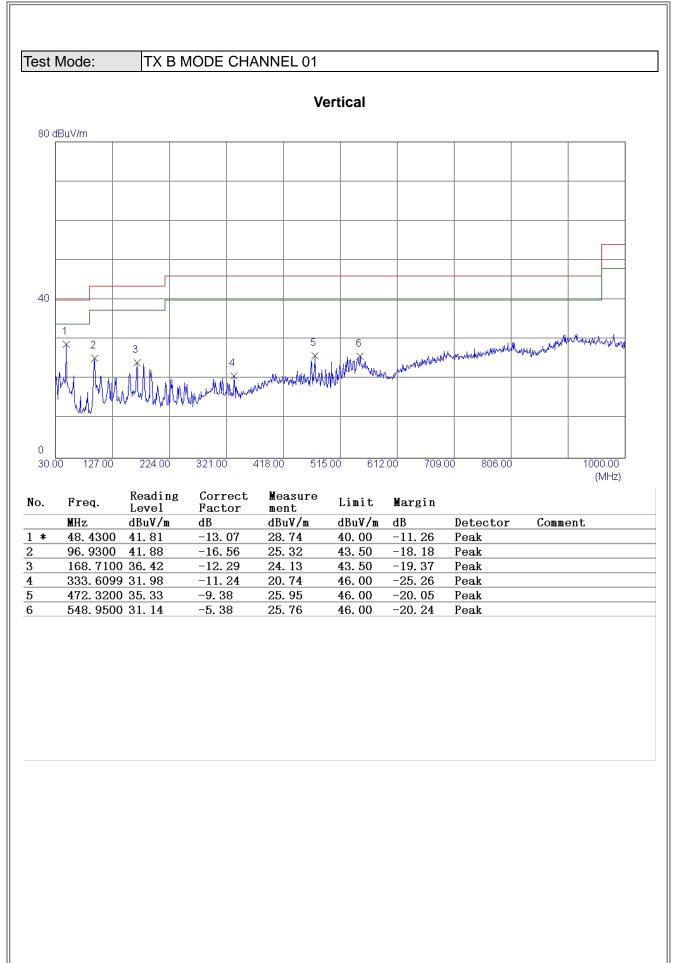
QP



ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)

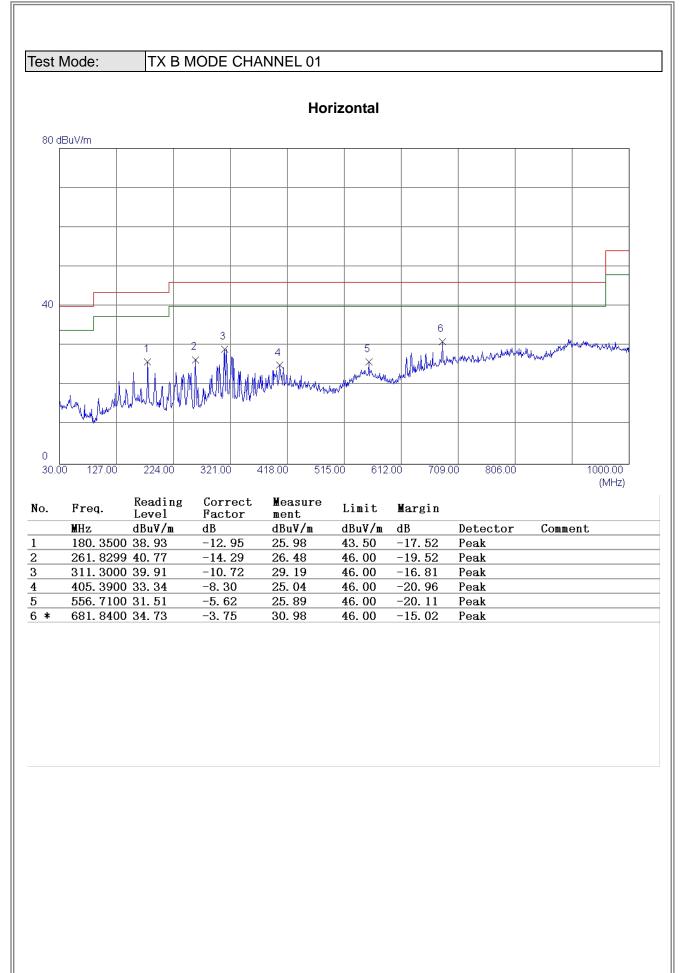






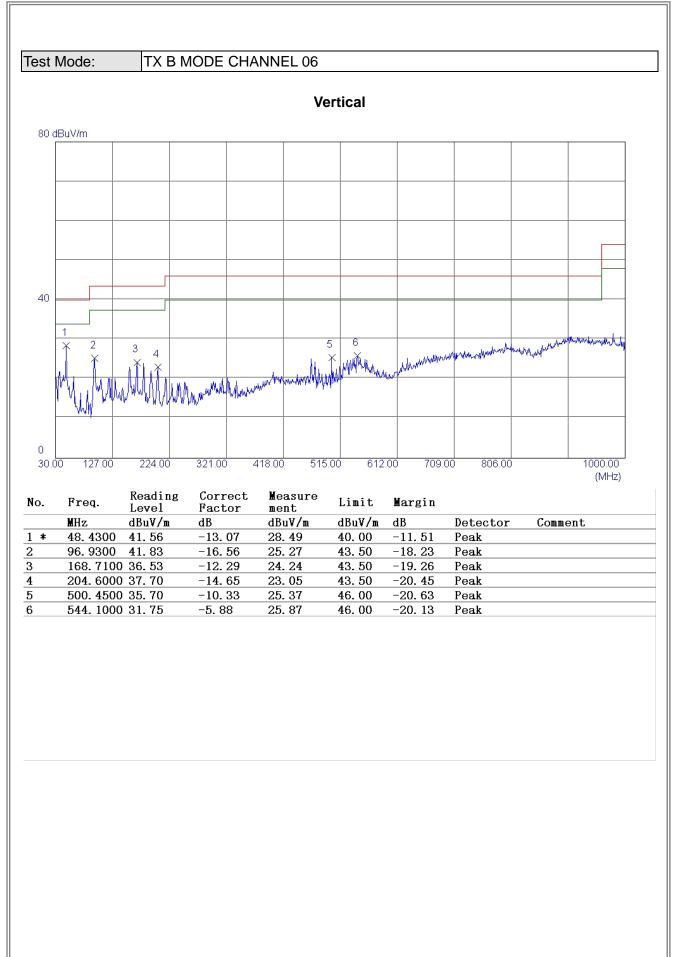






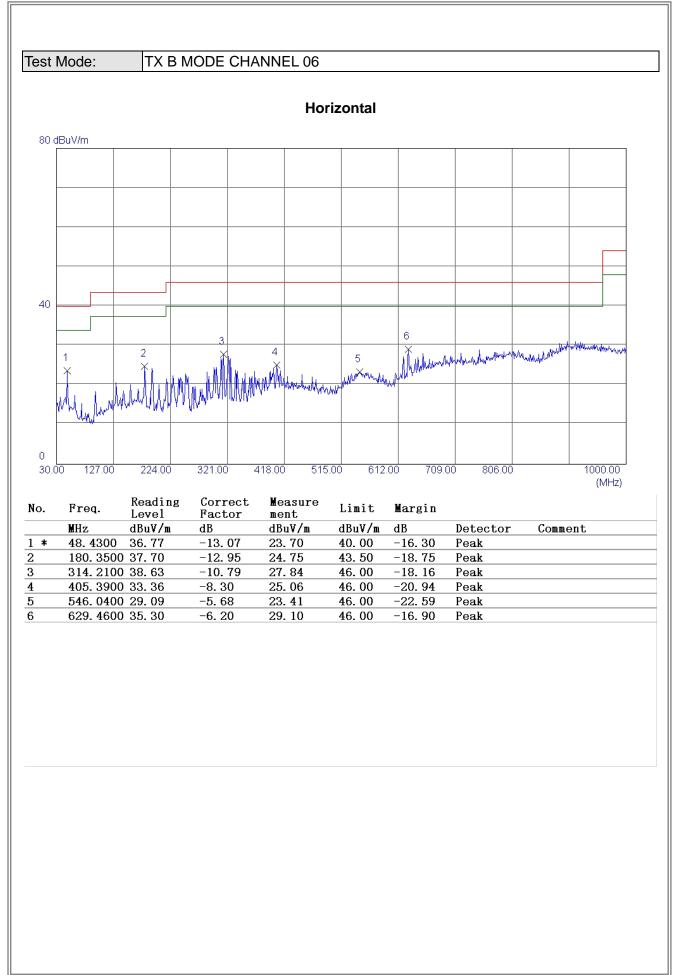






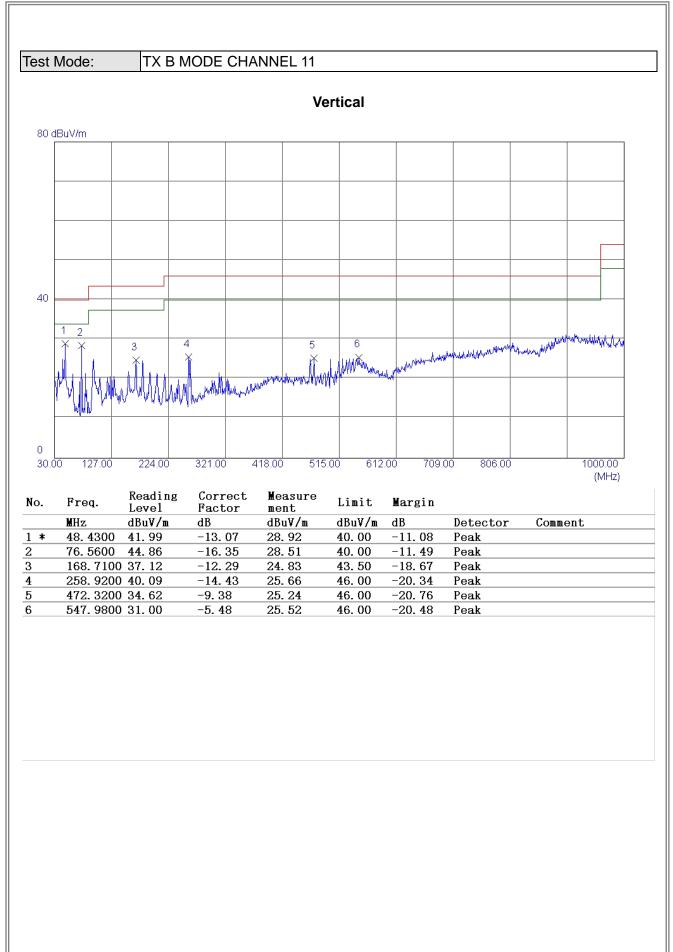






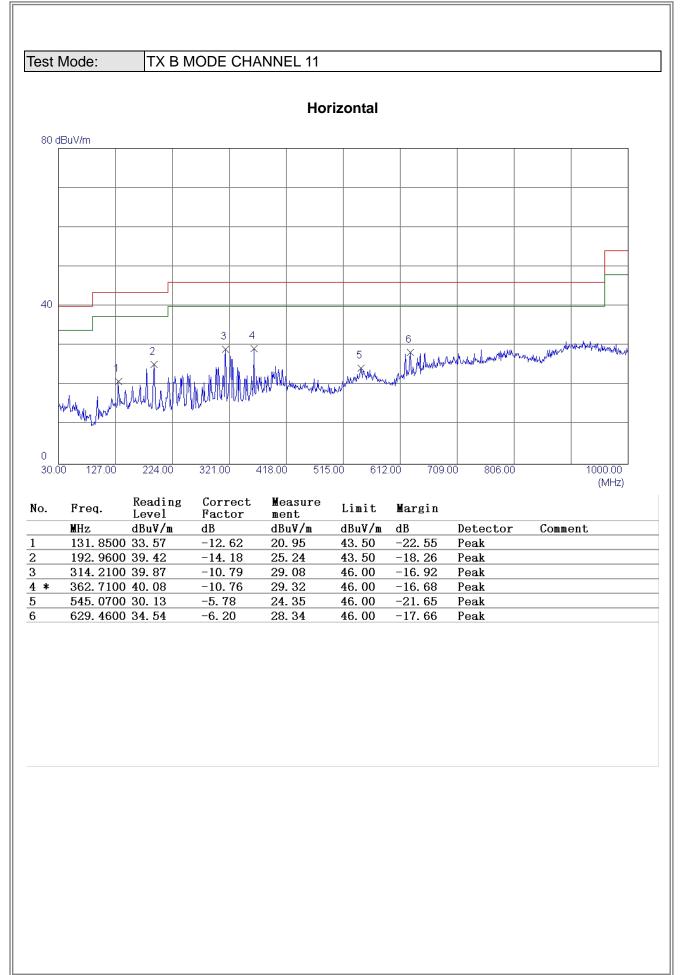










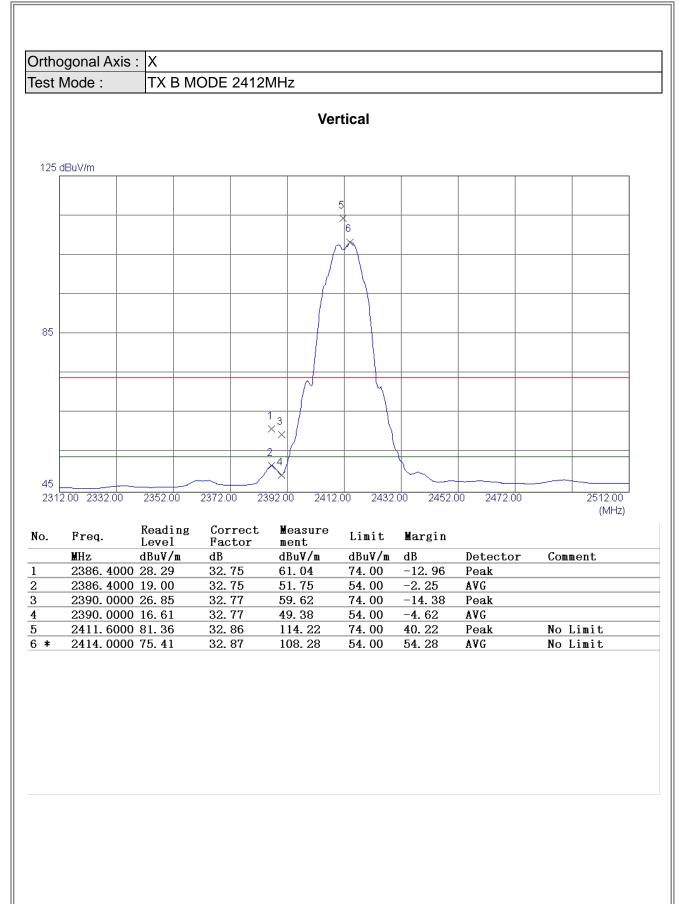




ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)

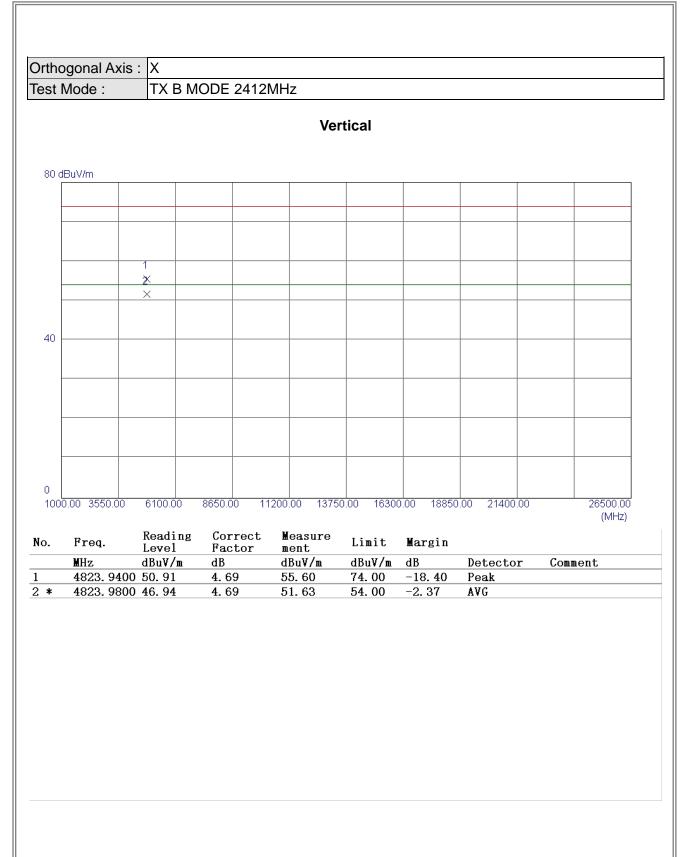






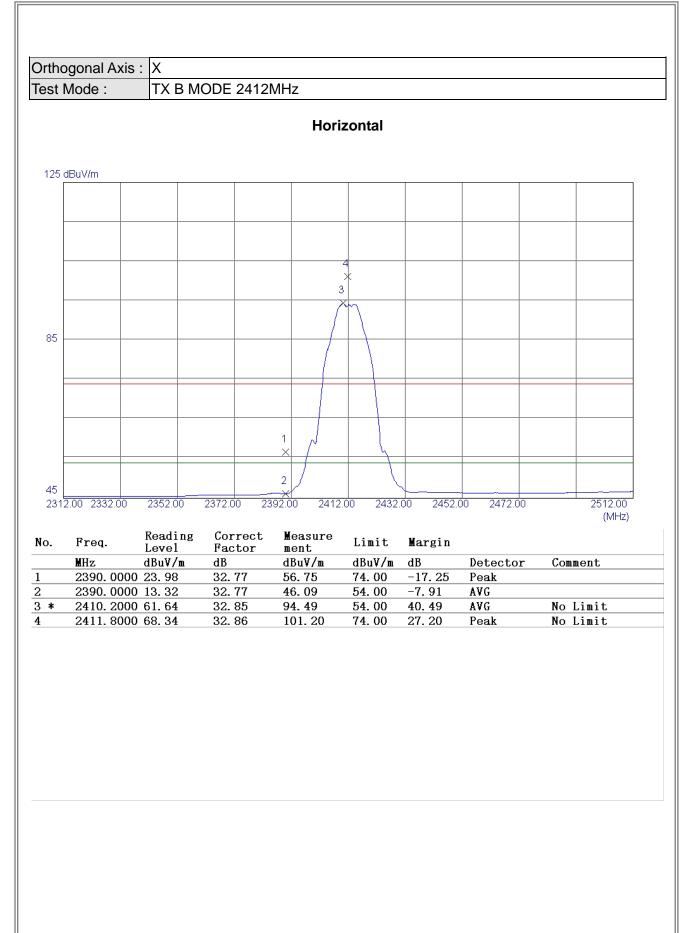






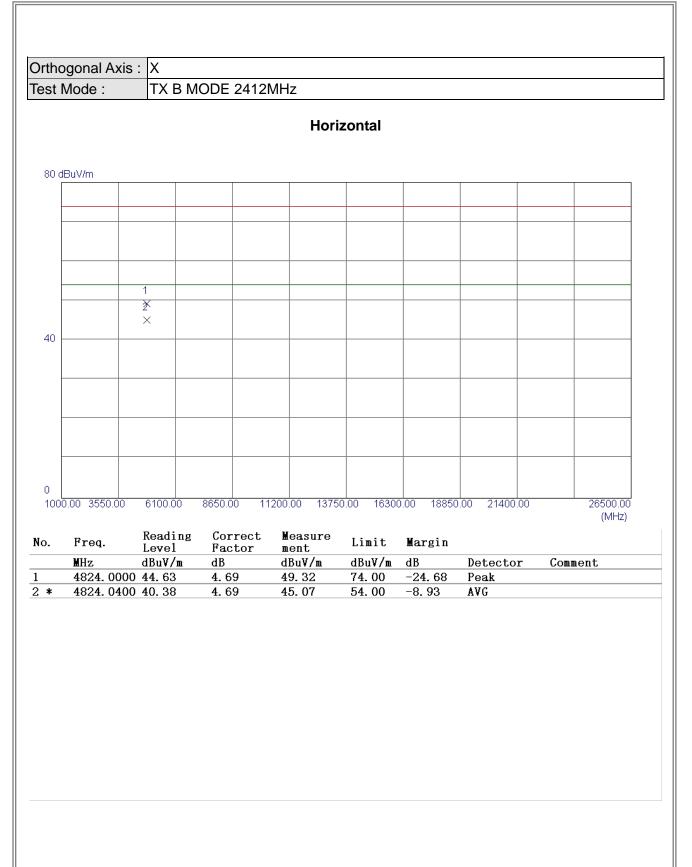






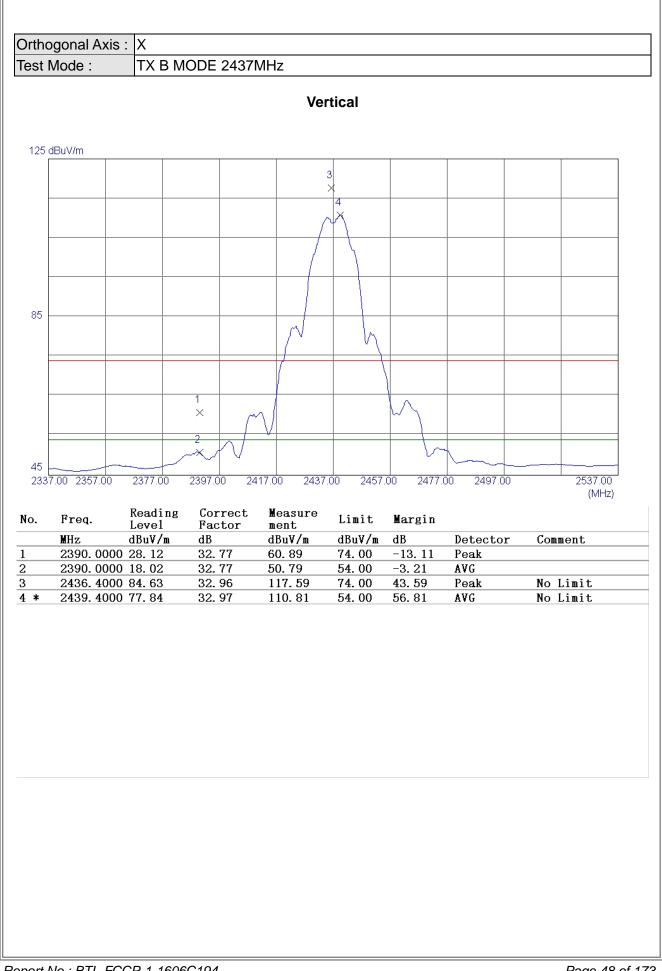






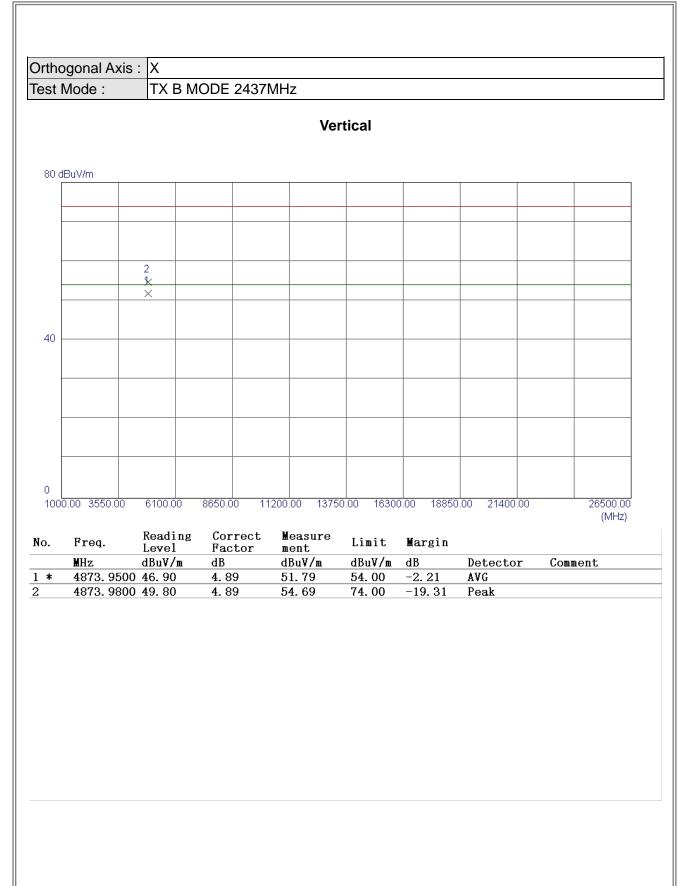






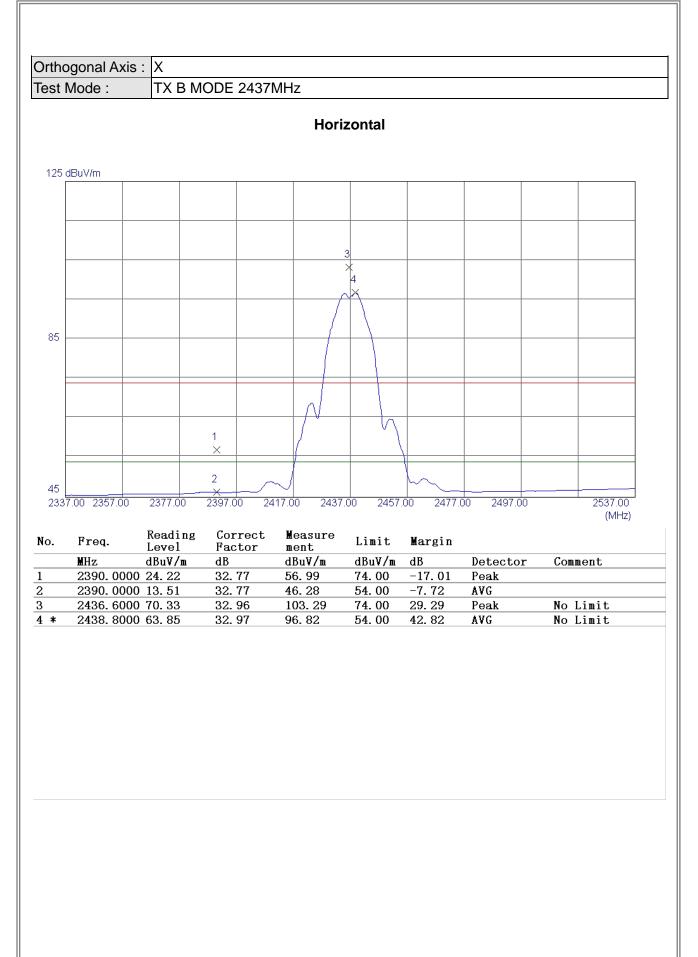






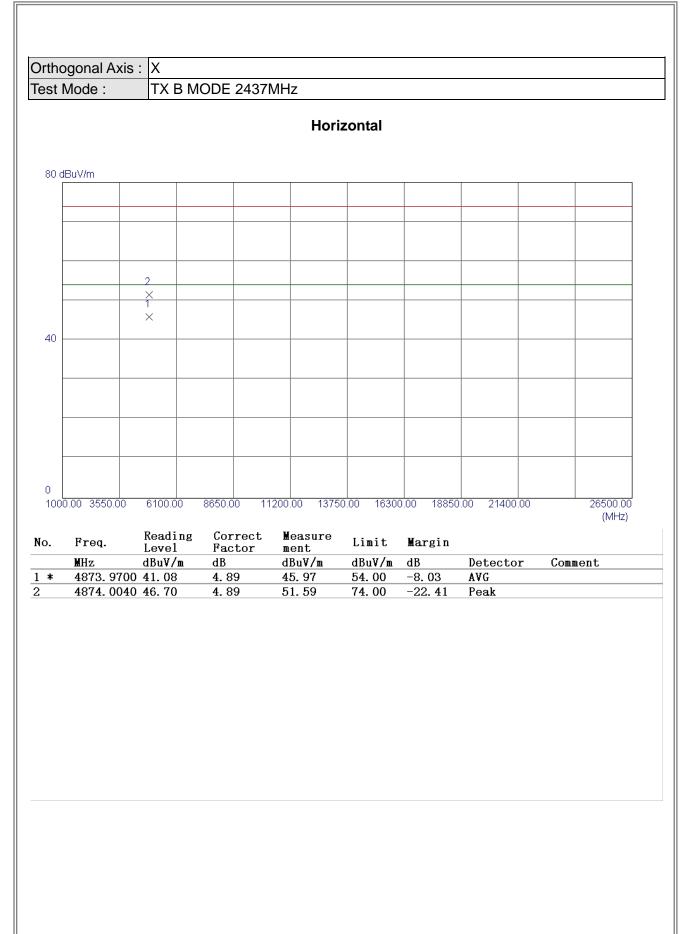






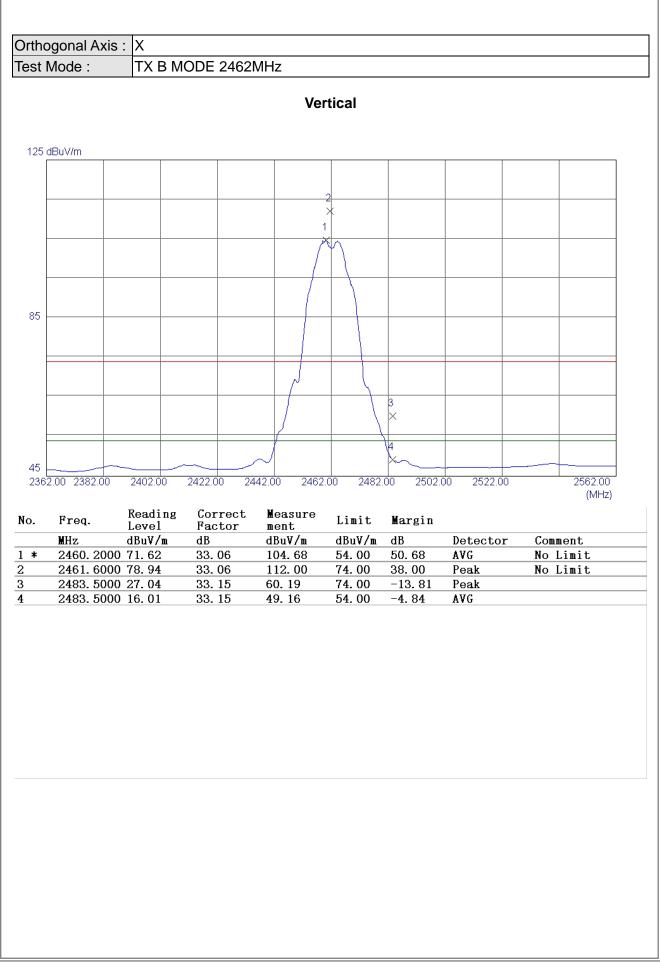






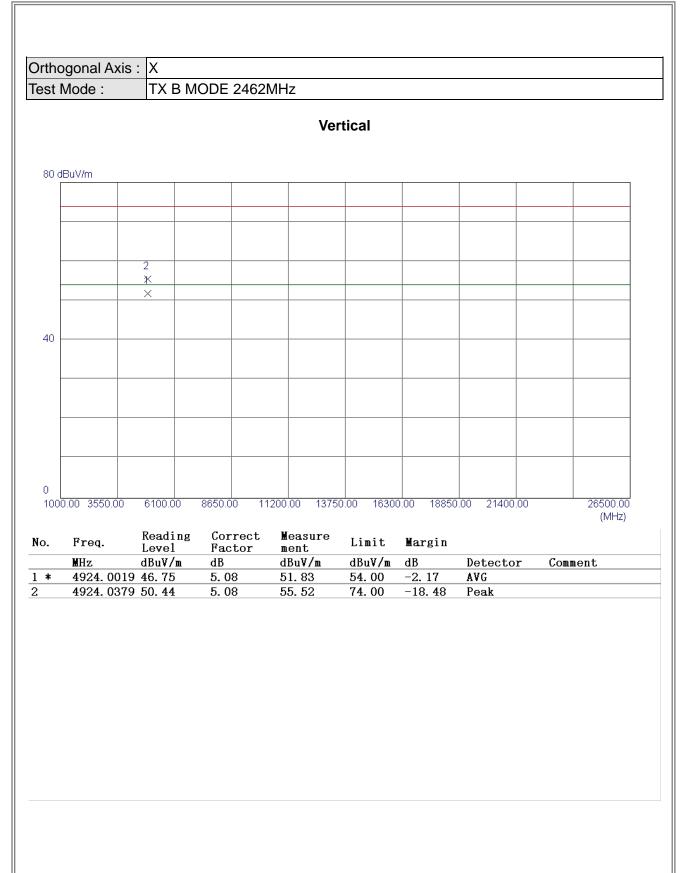






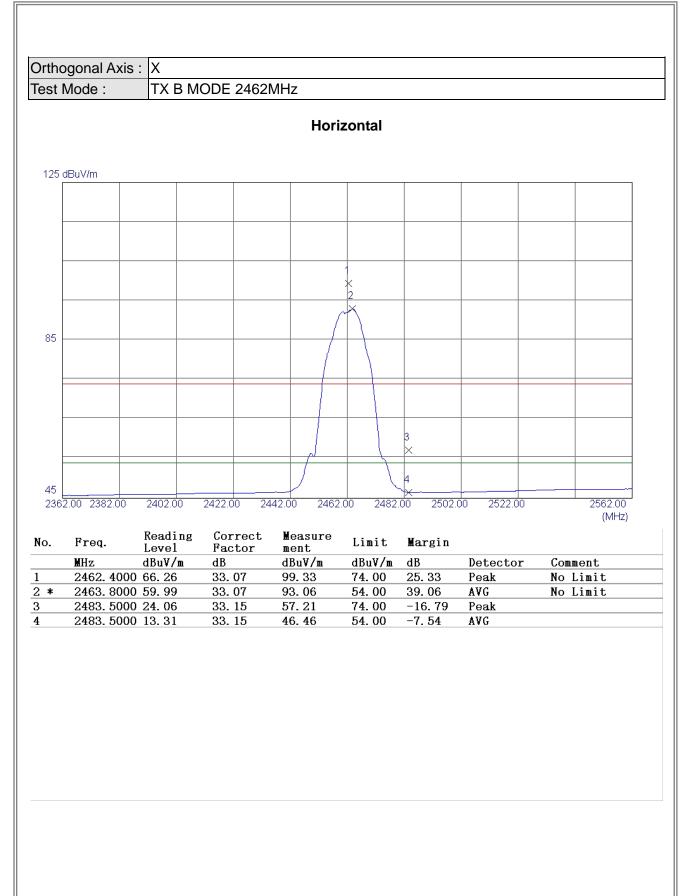






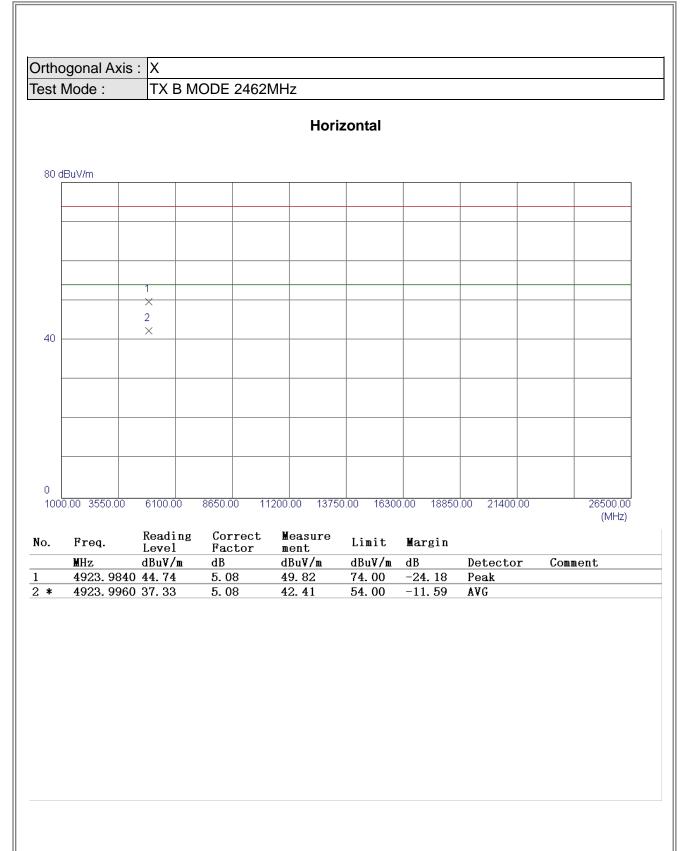






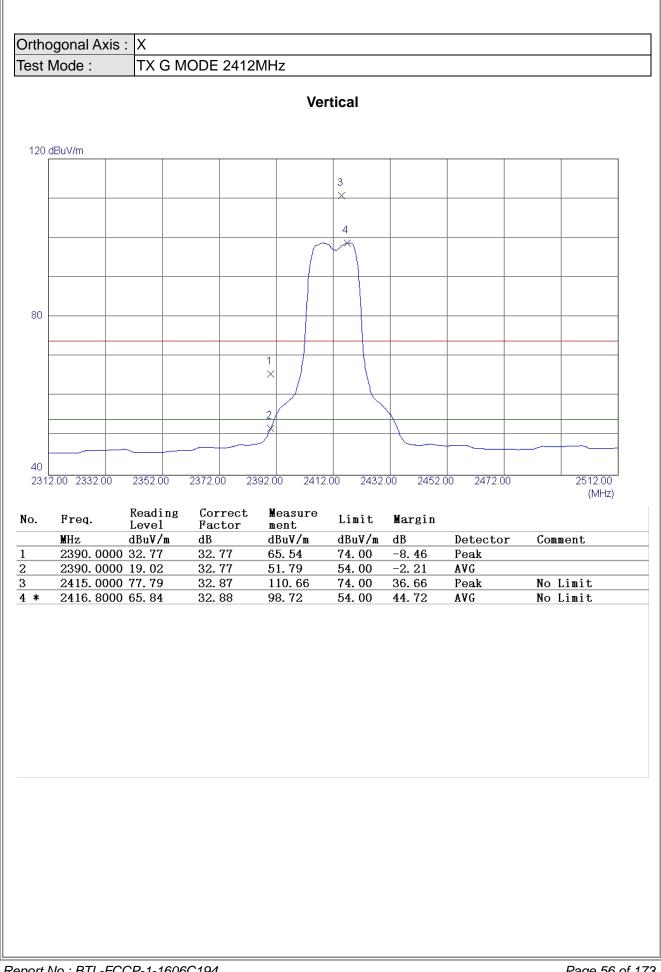






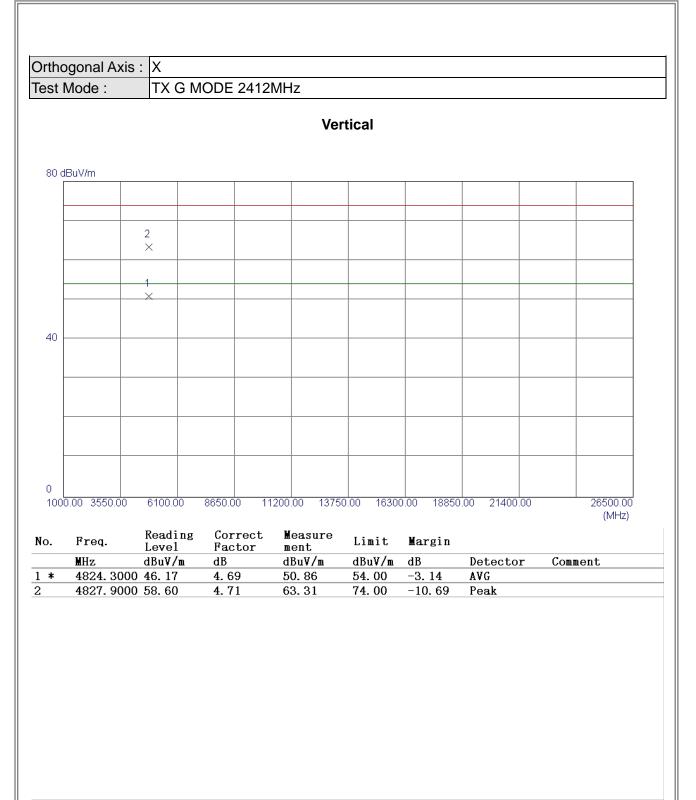






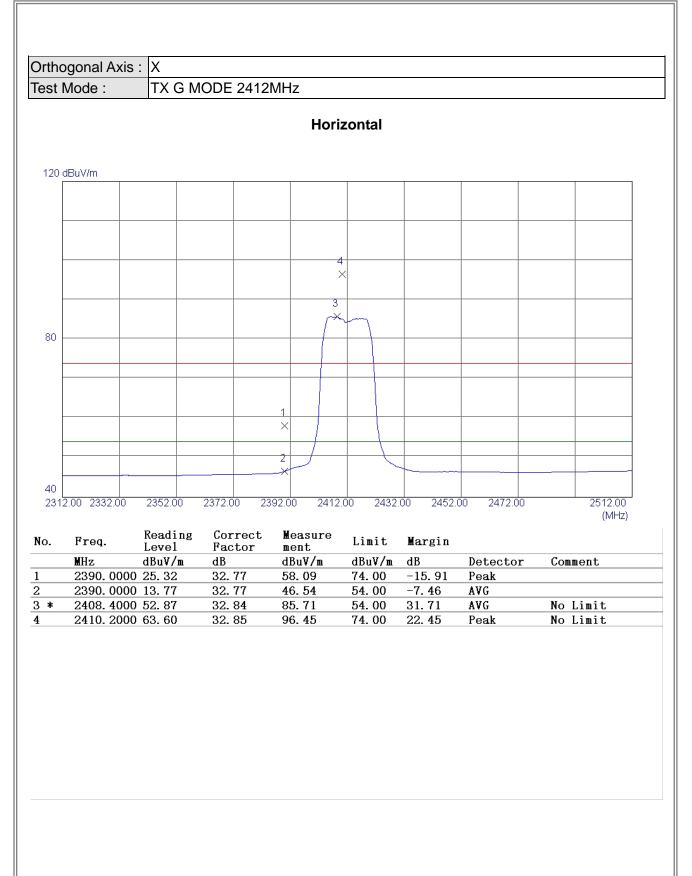






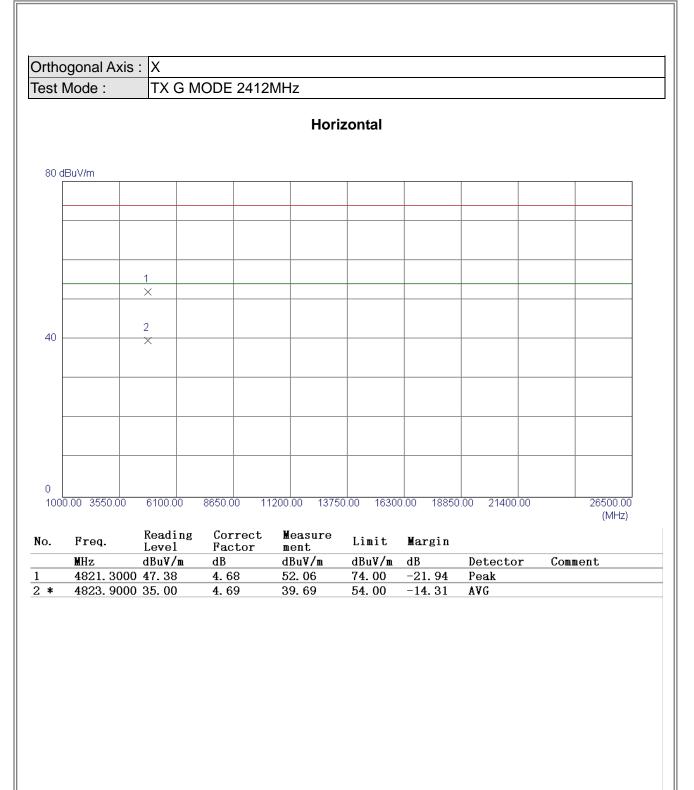






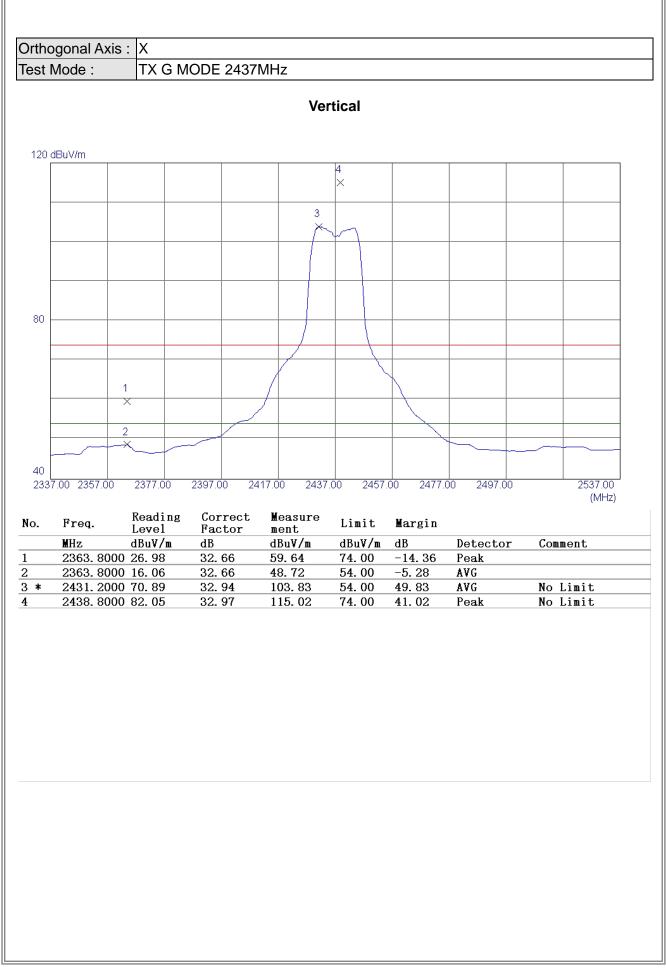






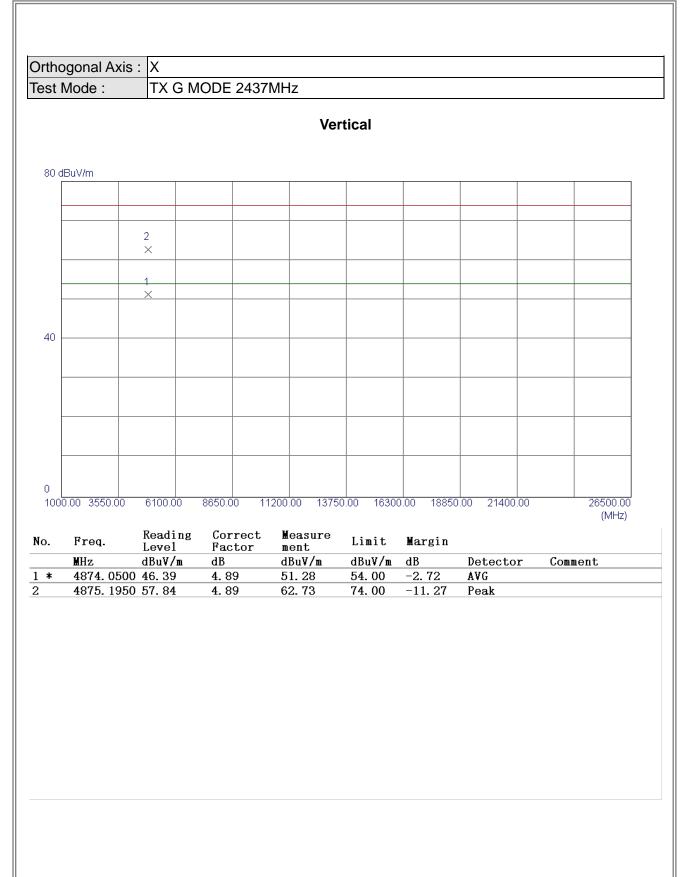






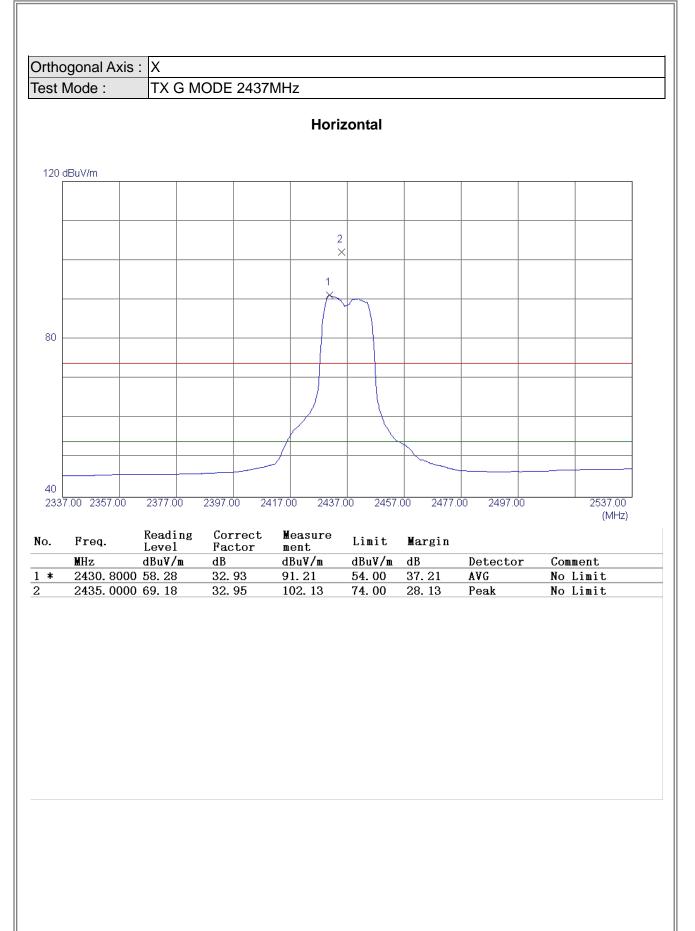






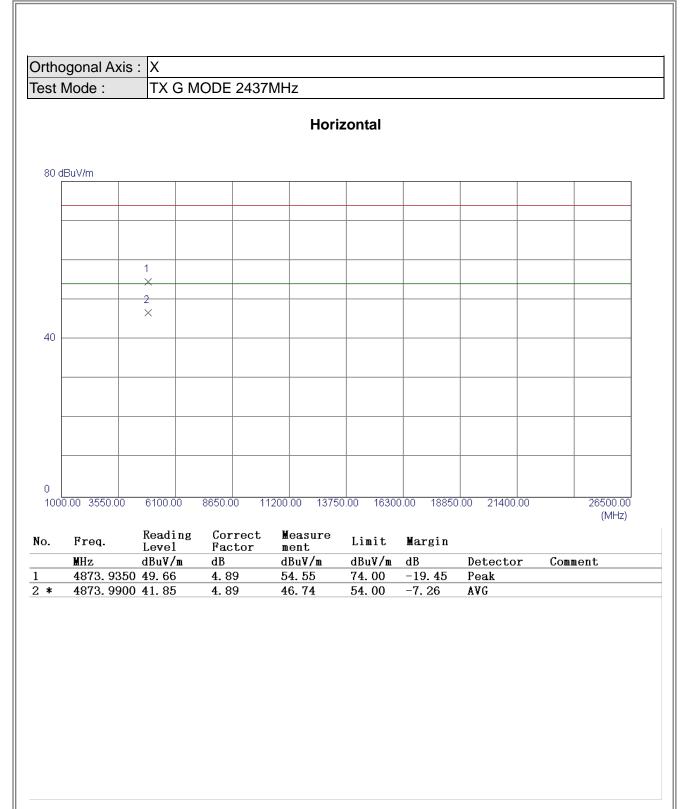






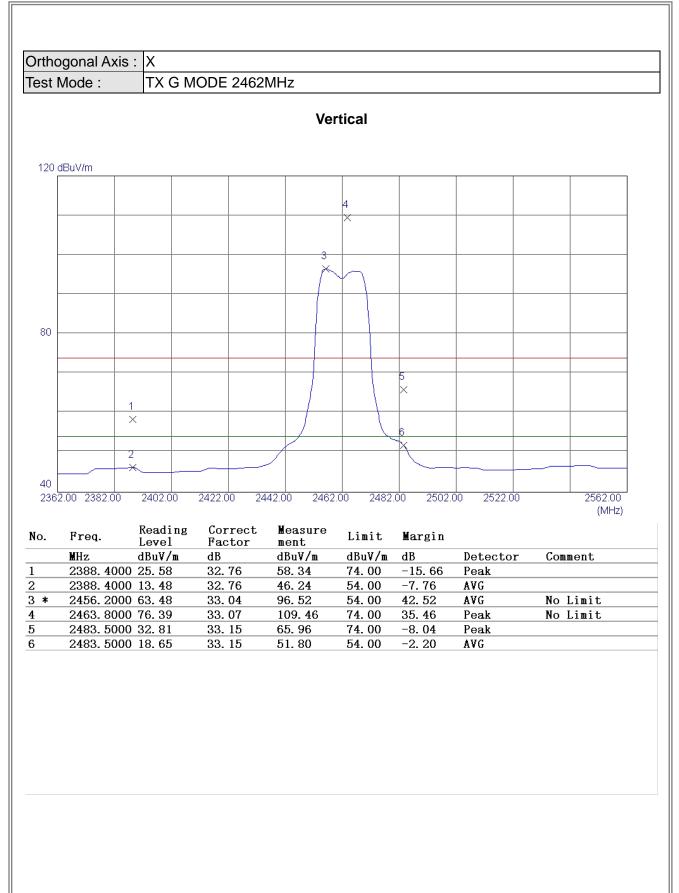






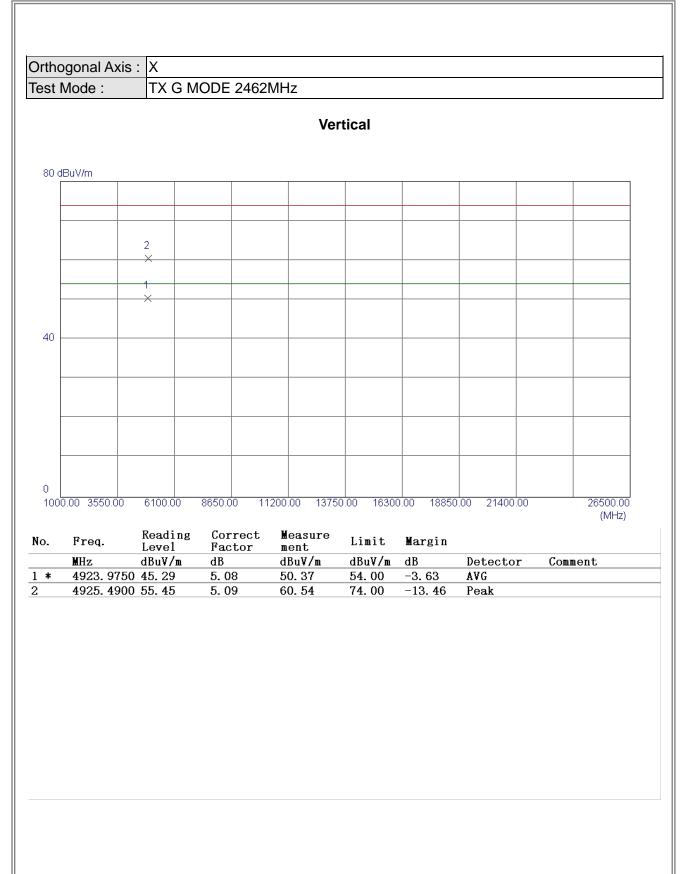






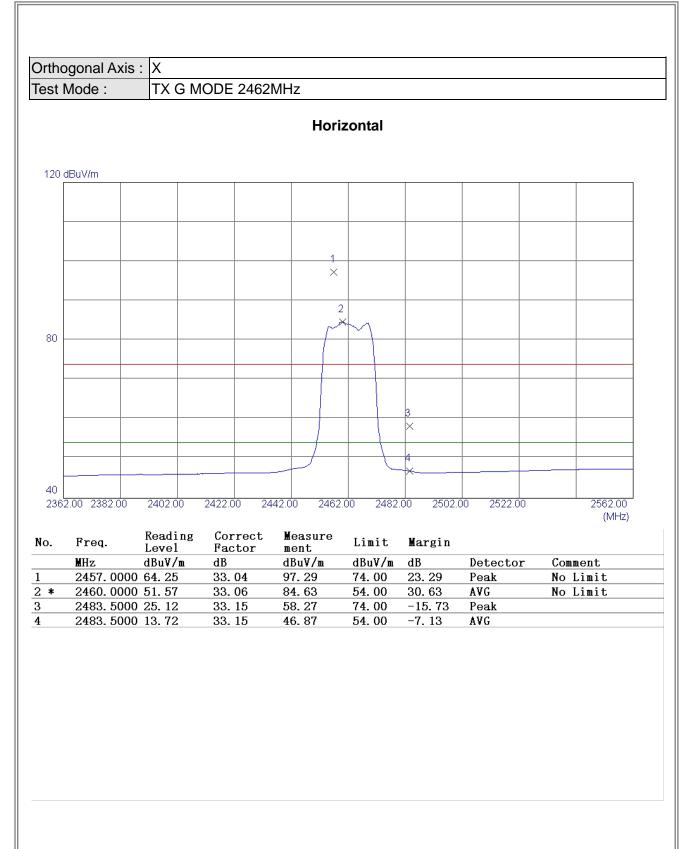






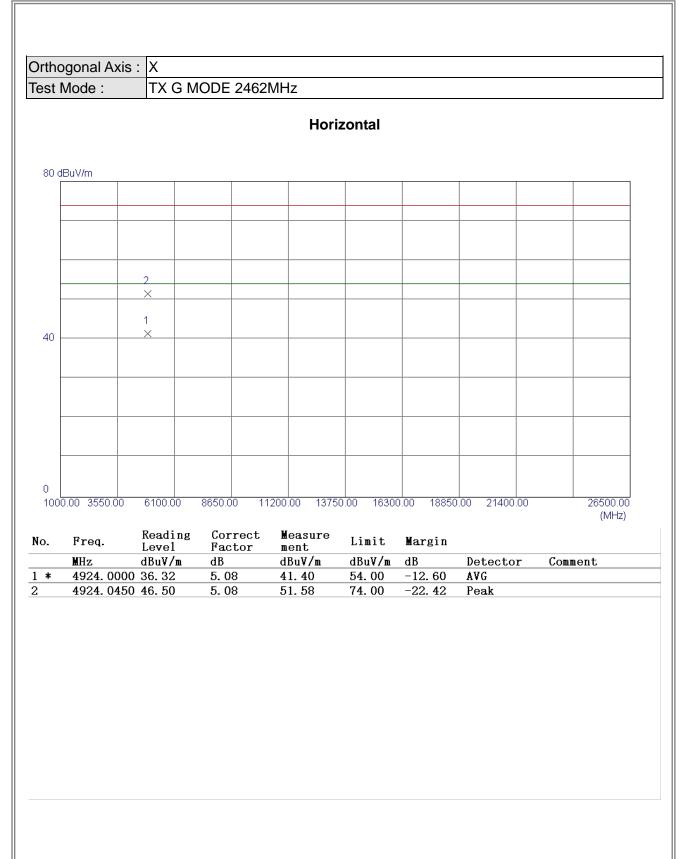






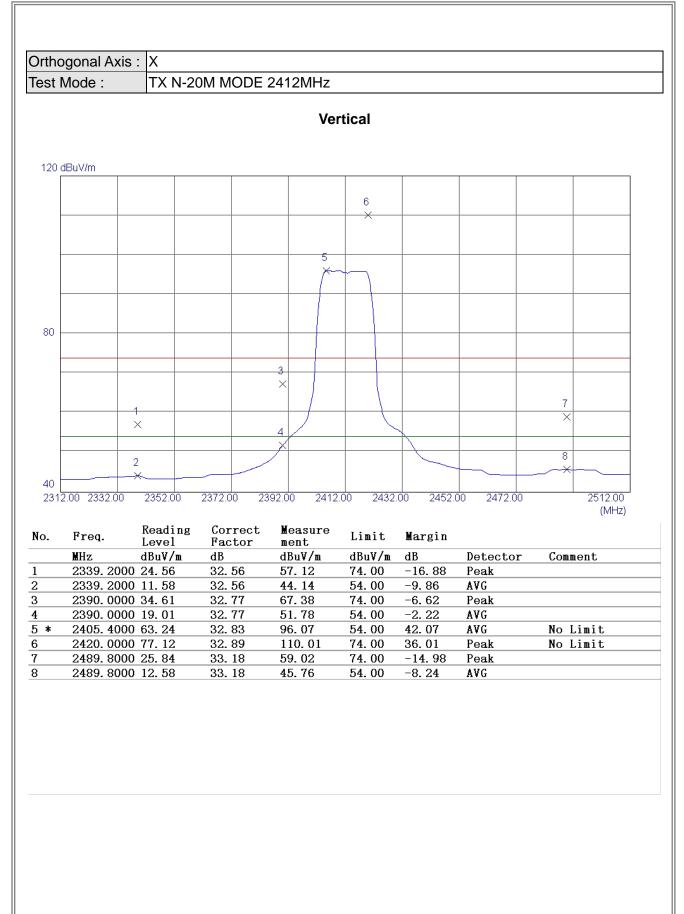






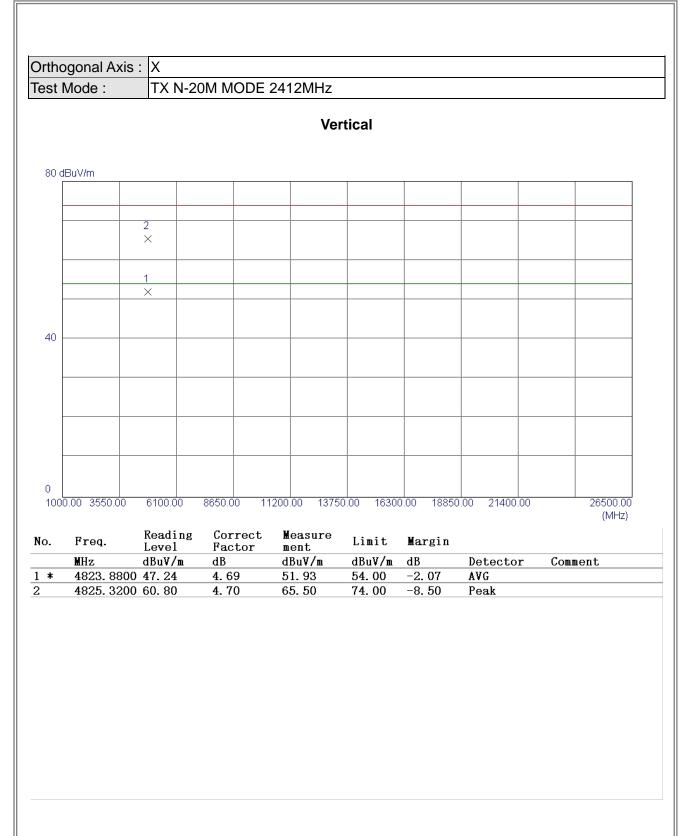






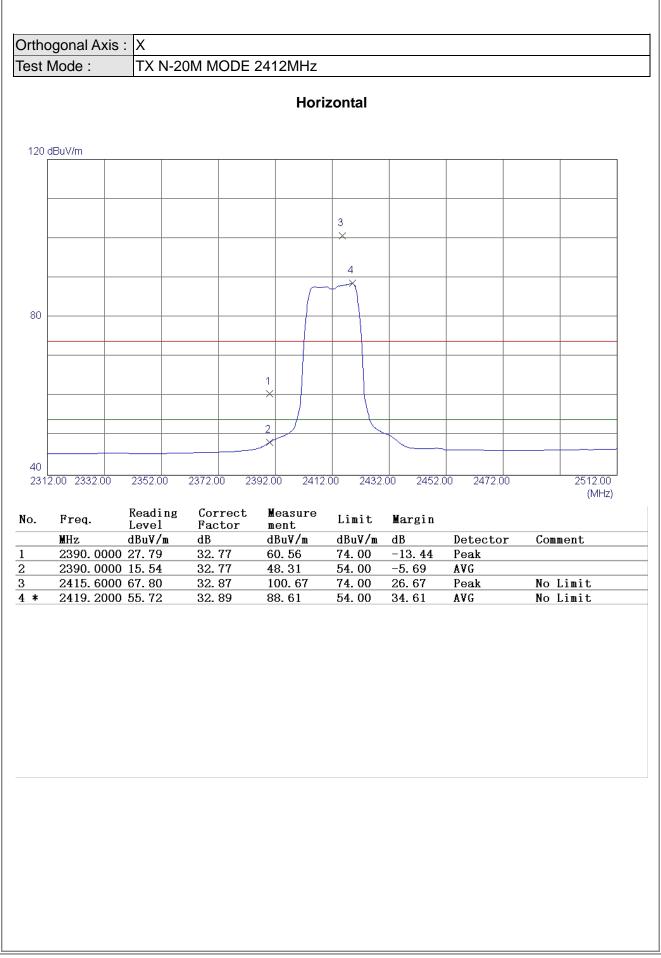






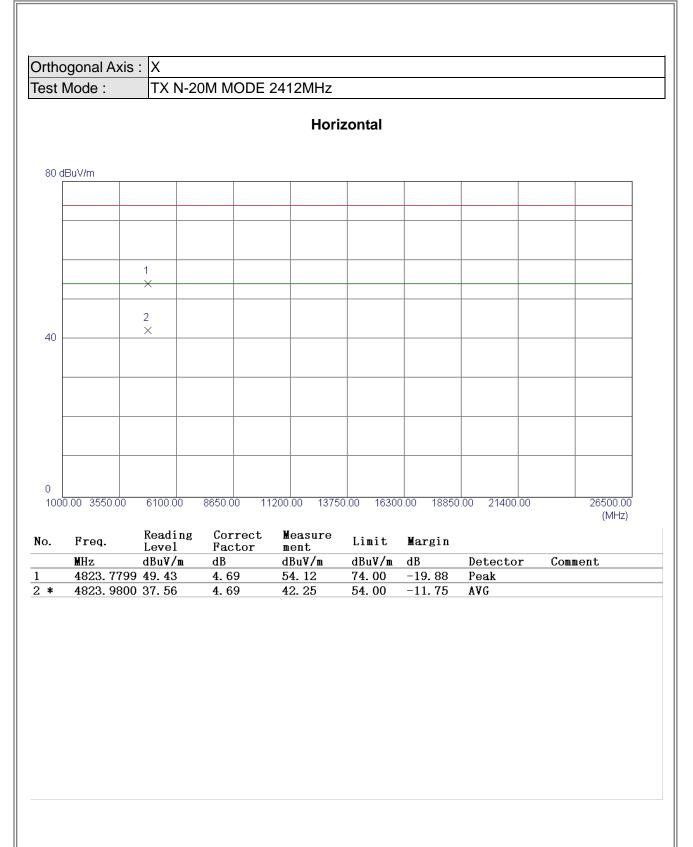






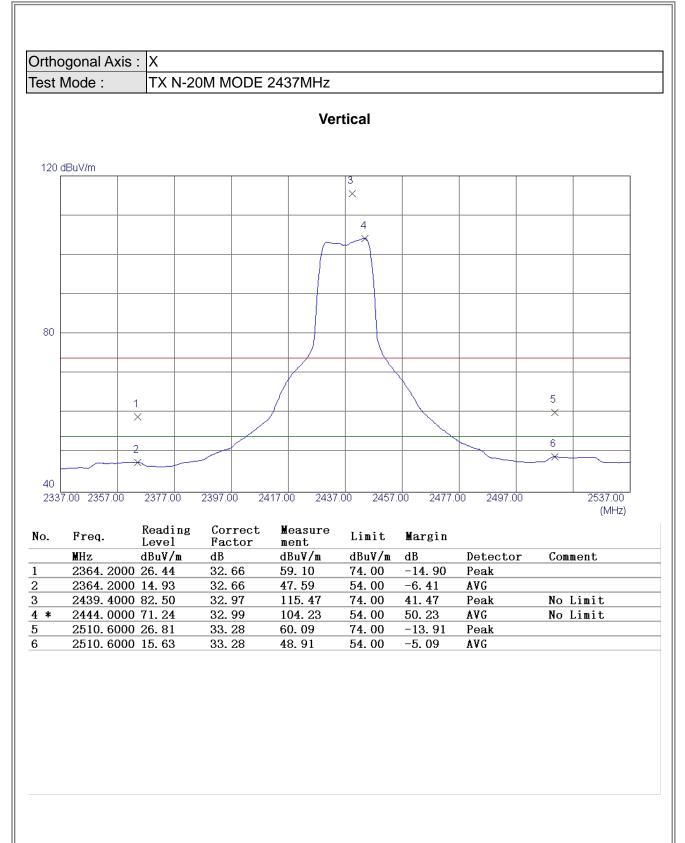






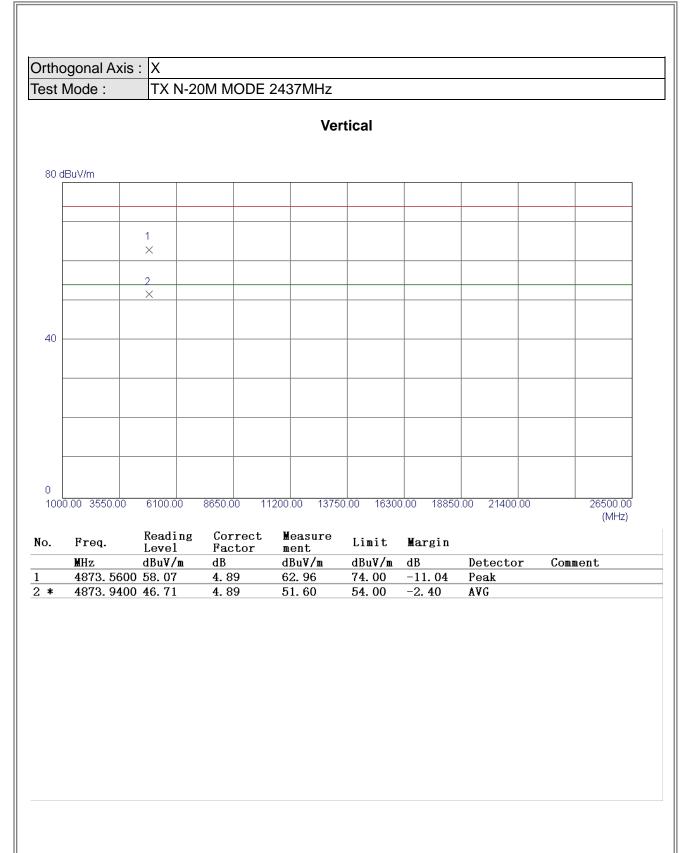






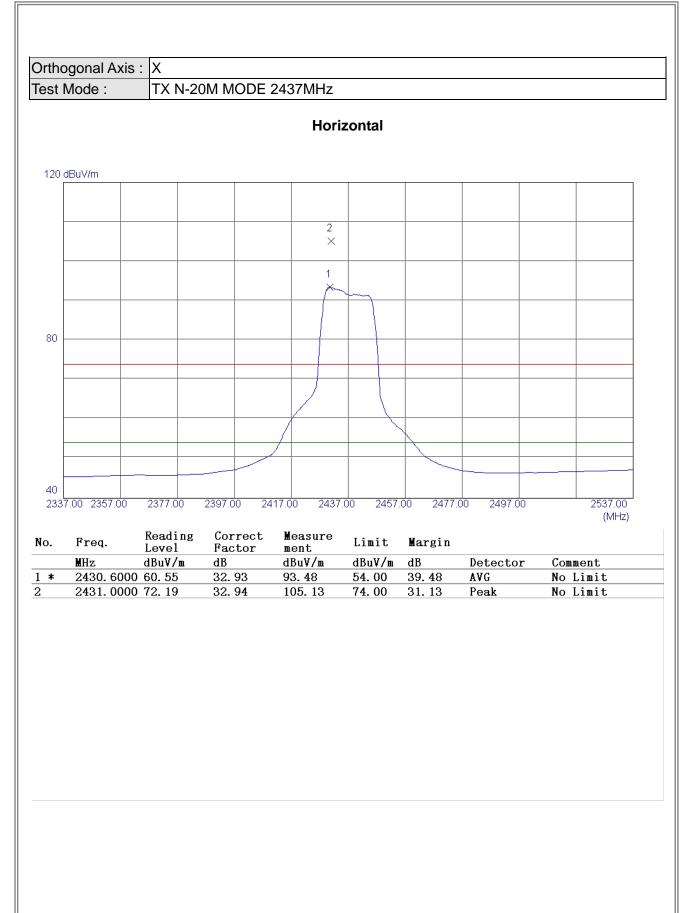






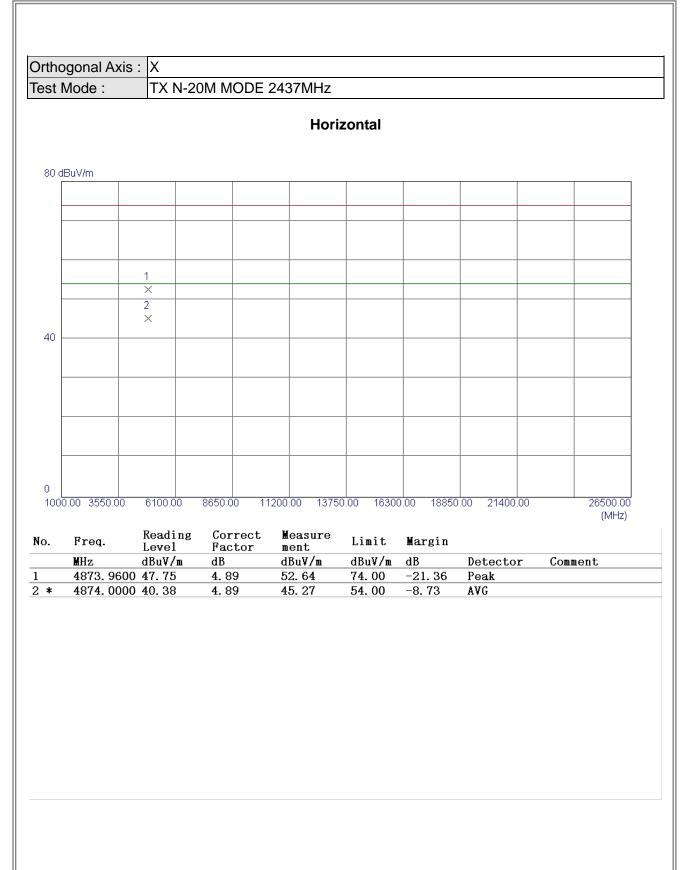






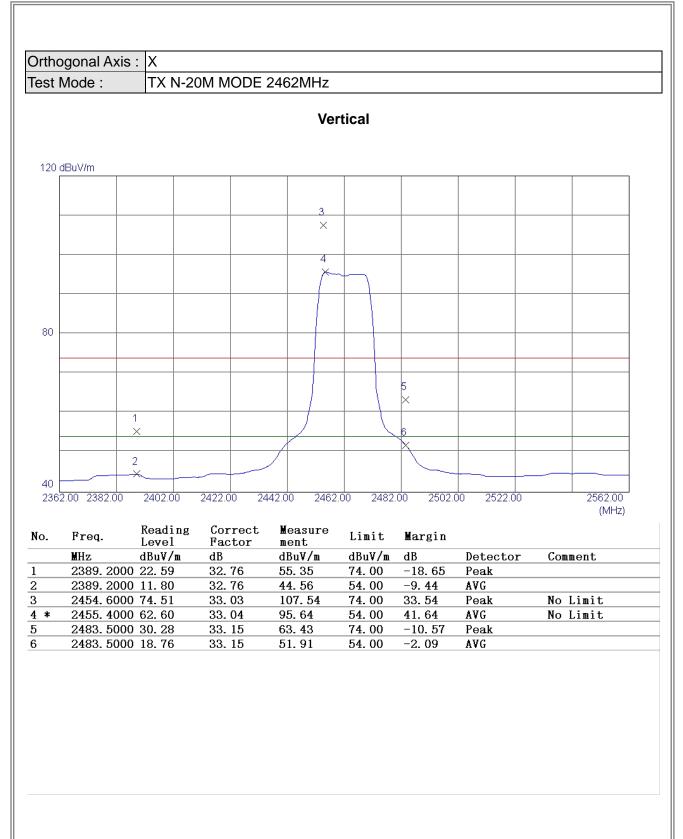






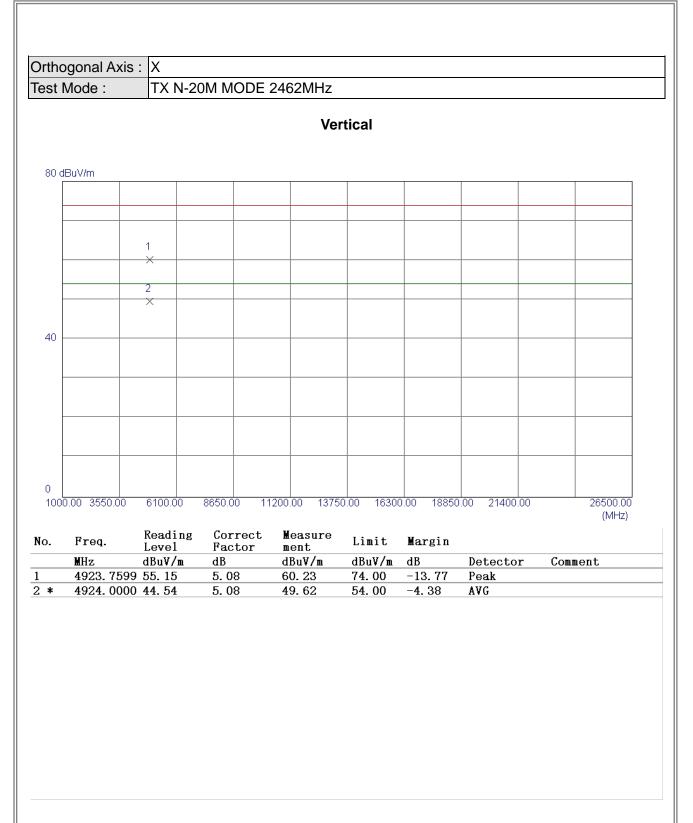






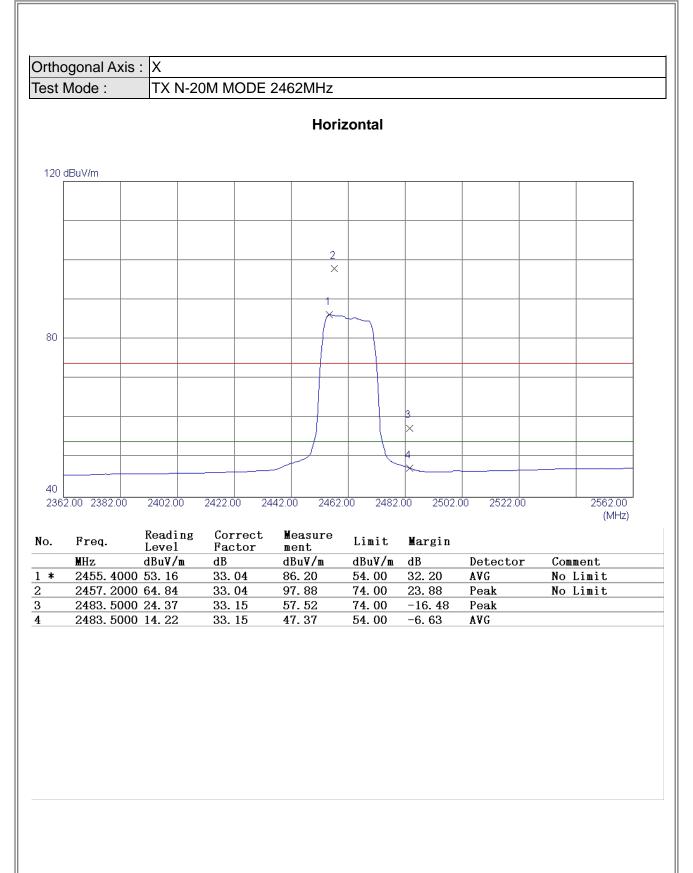






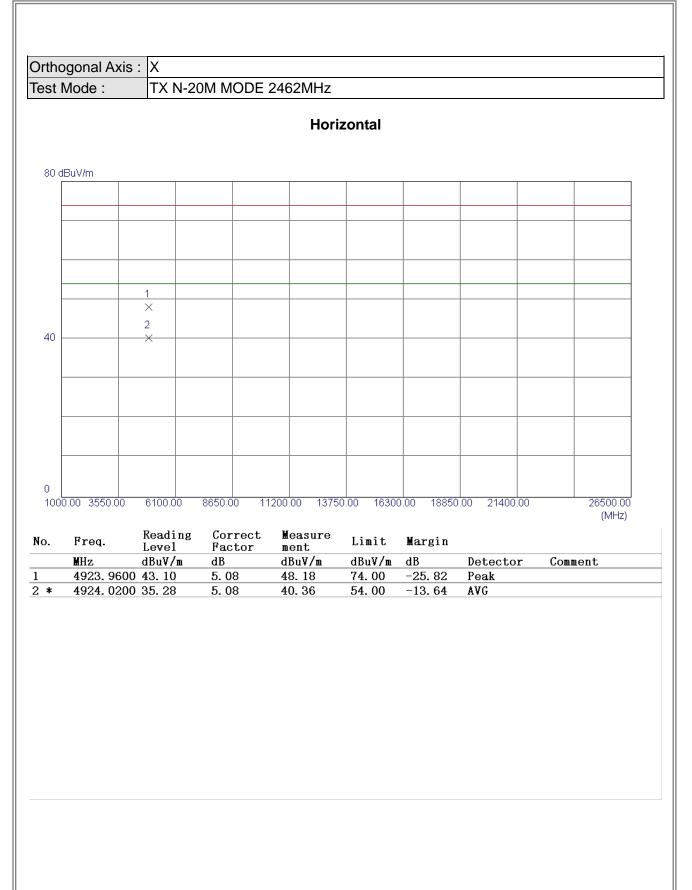






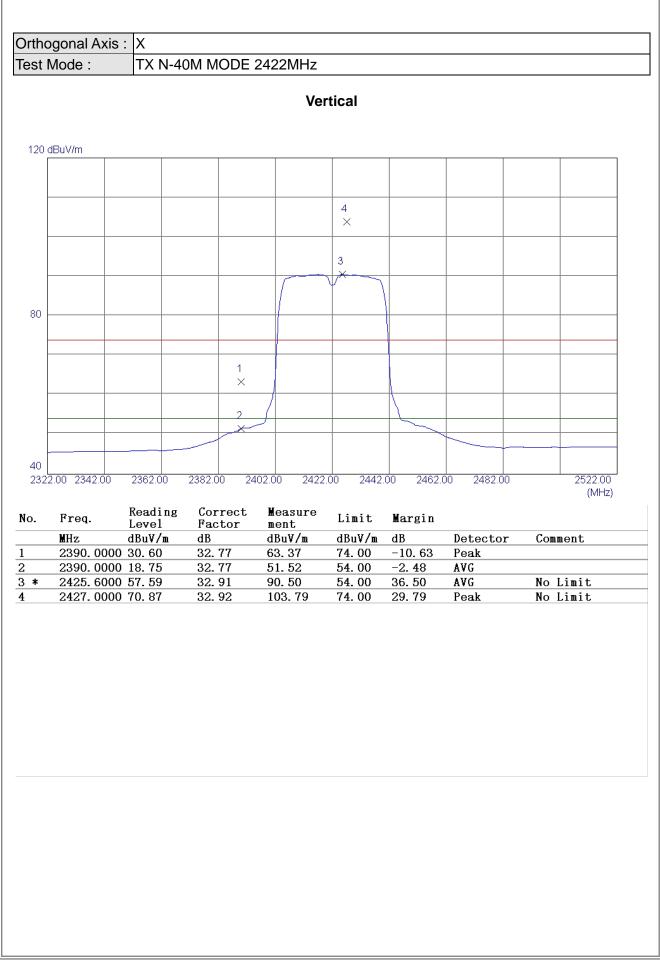






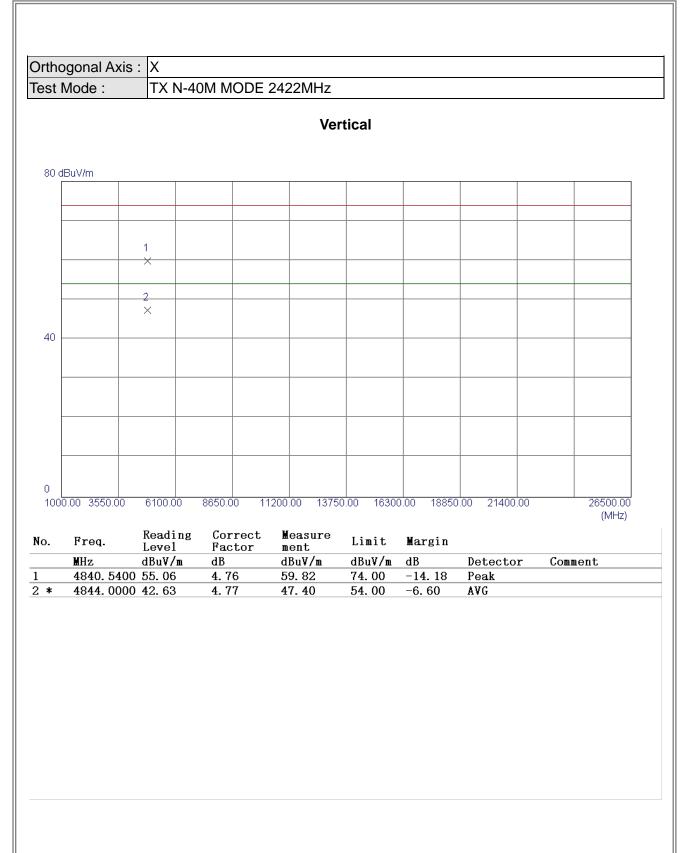






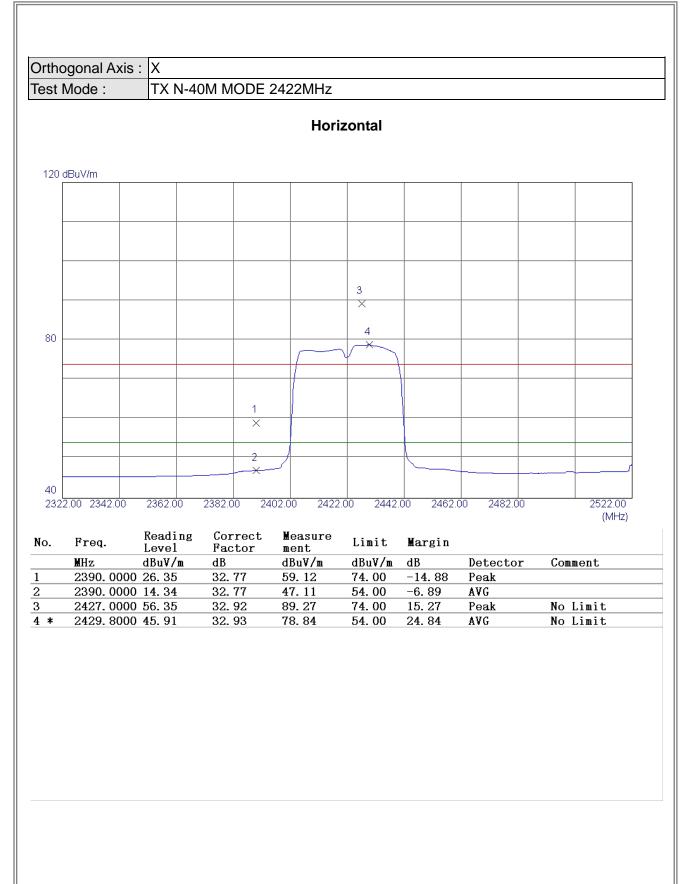






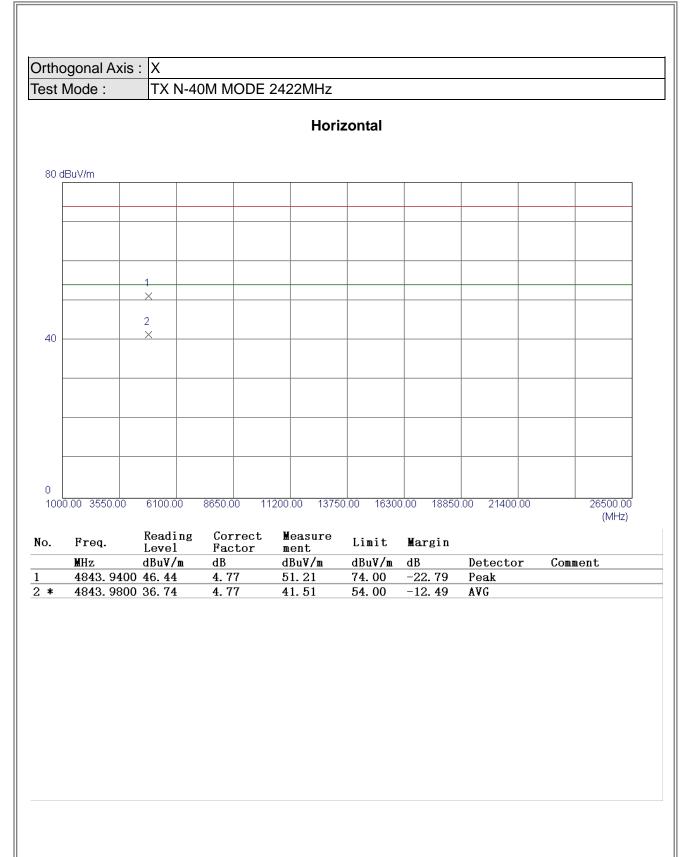






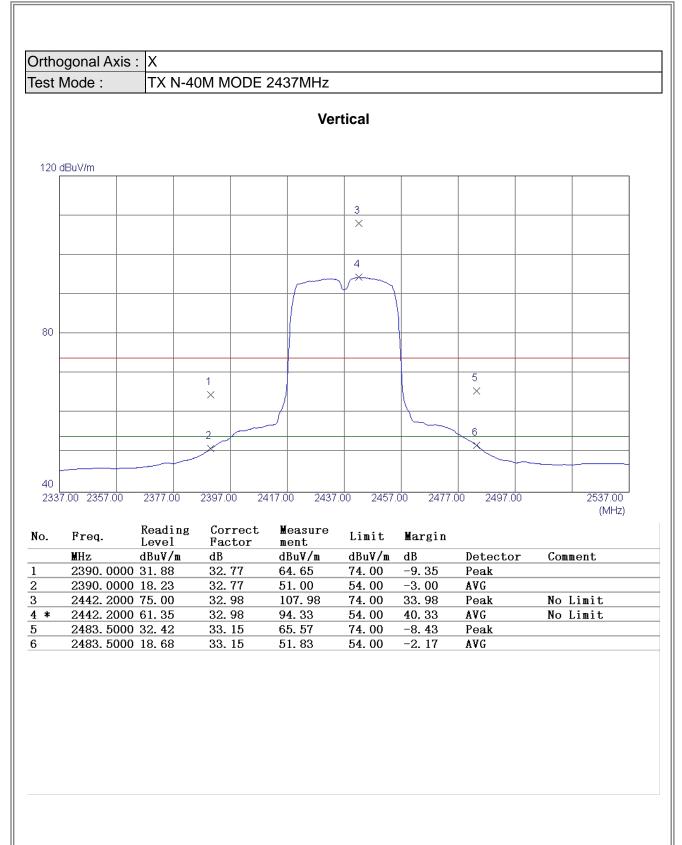






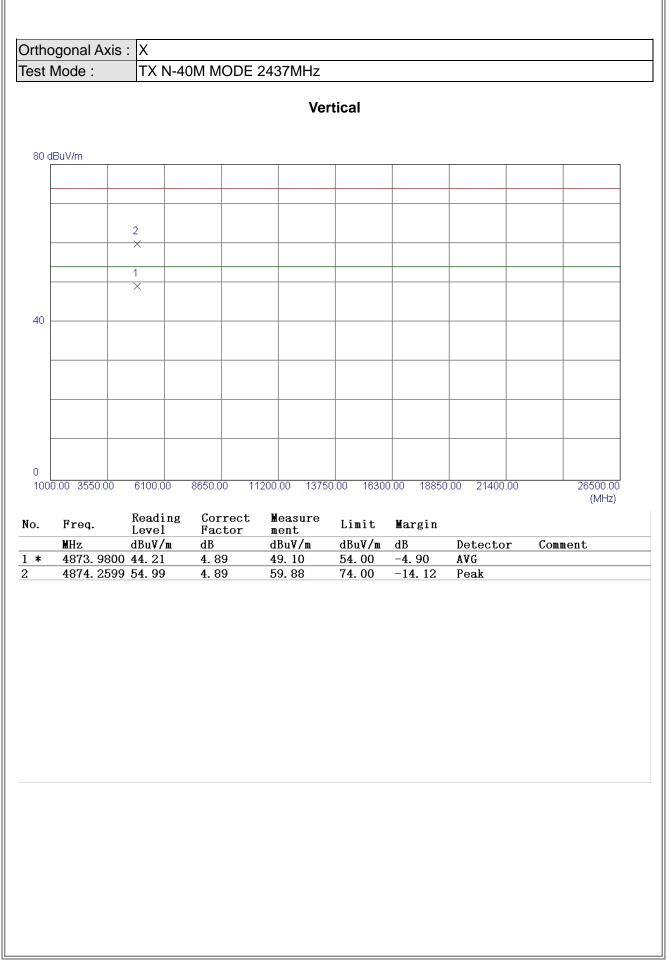






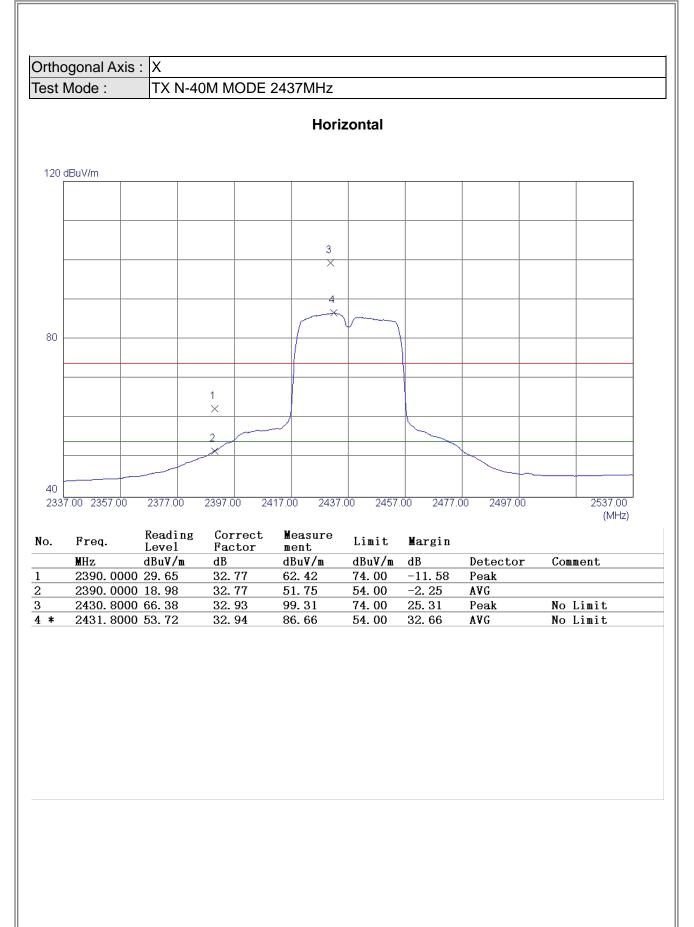






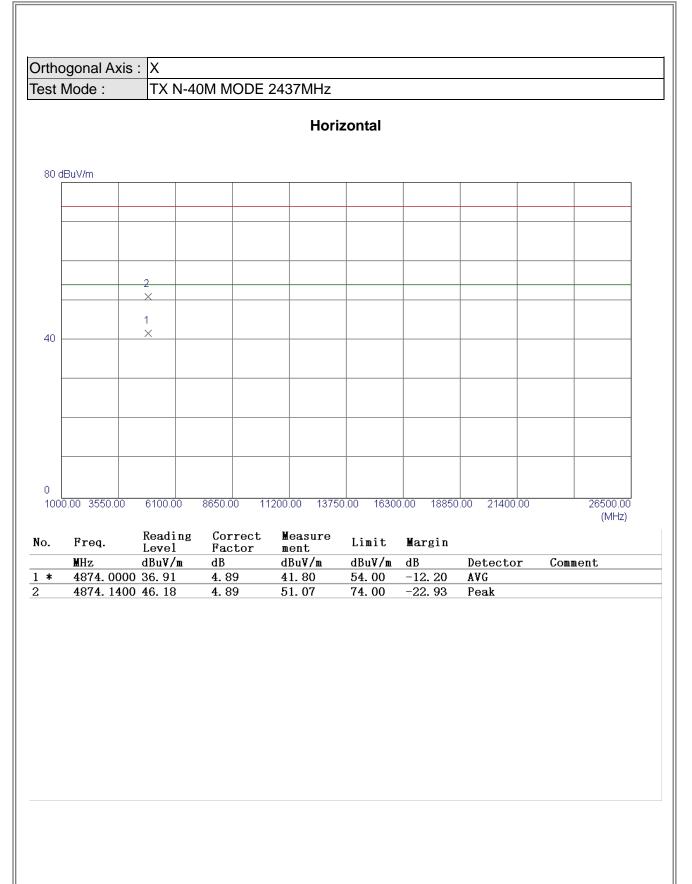






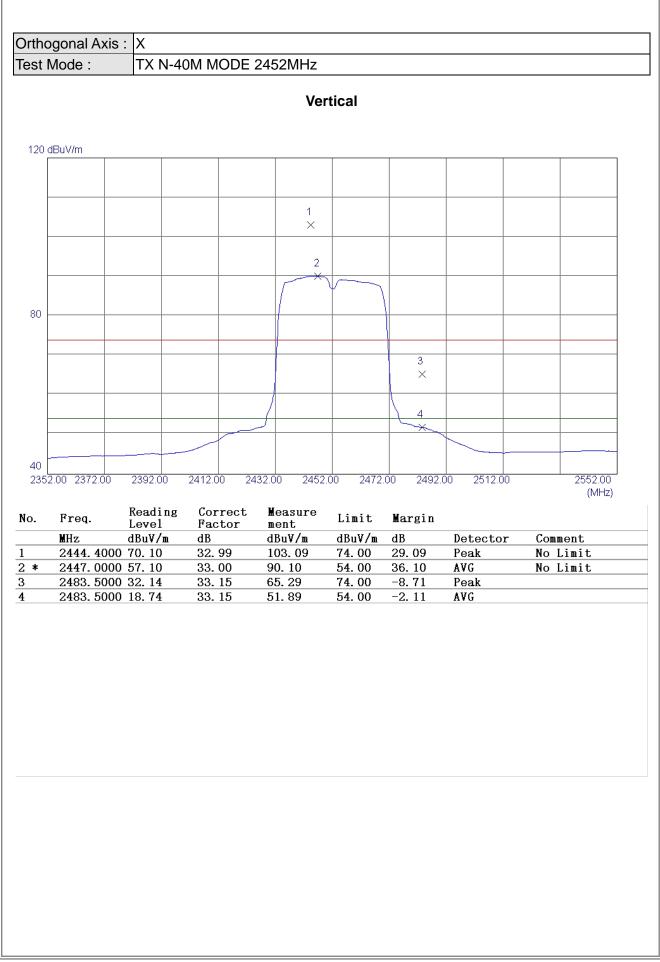






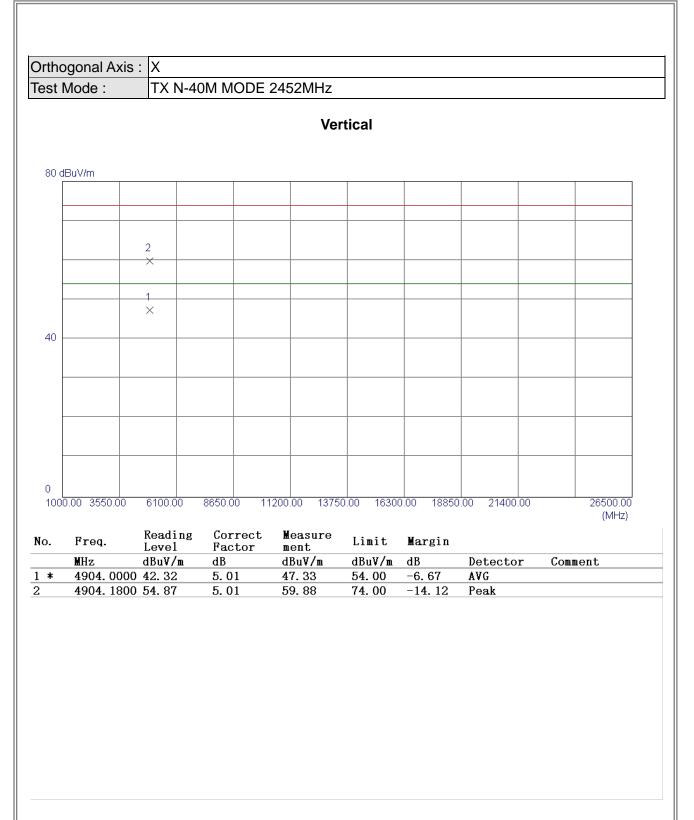






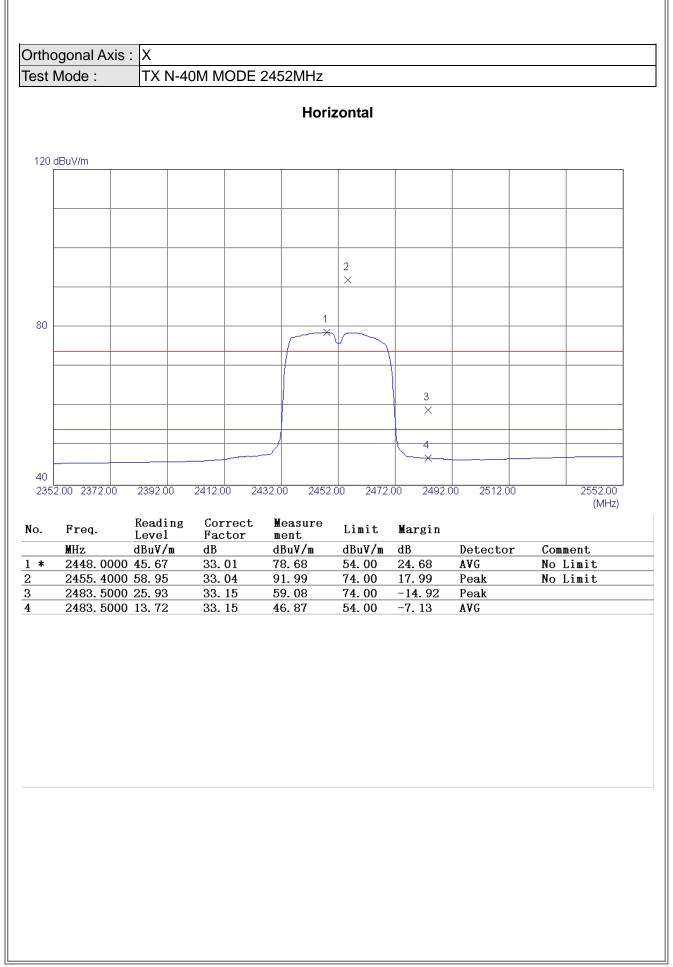






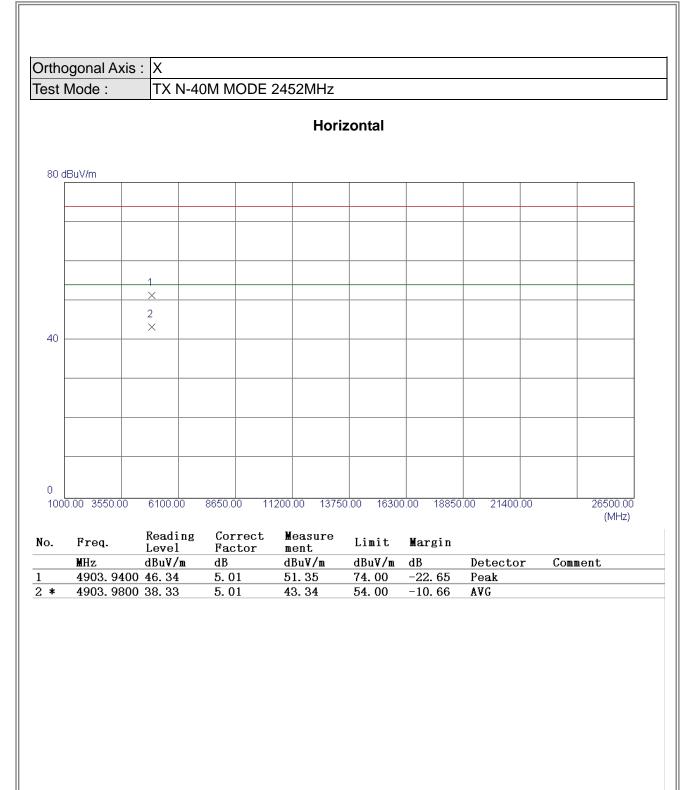












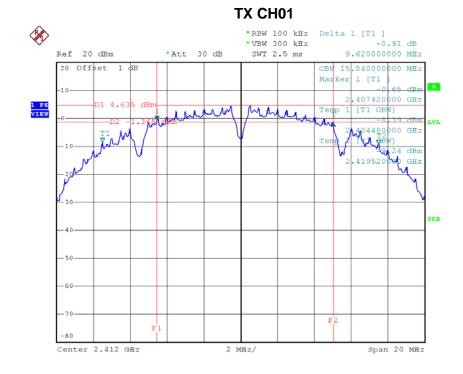


ATTACHMENT E - BANDWIDTH



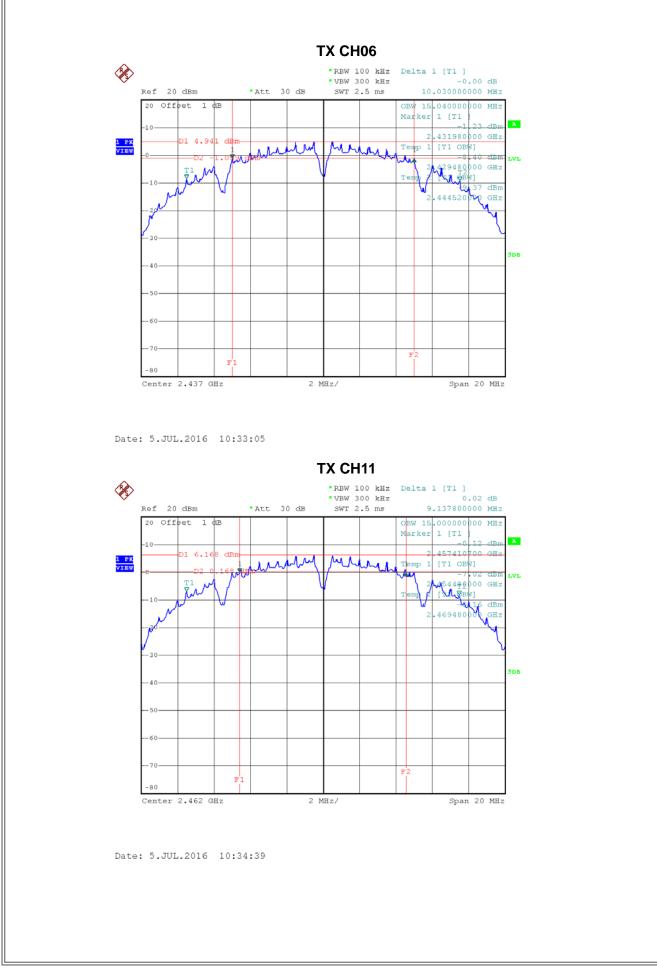
Test Mode : TX B Mode_CH01/06/11

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	9.62	15.04	500	Complies
2437	10.03	15.04	500	Complies
2462	9.14	15.00	500	Complies



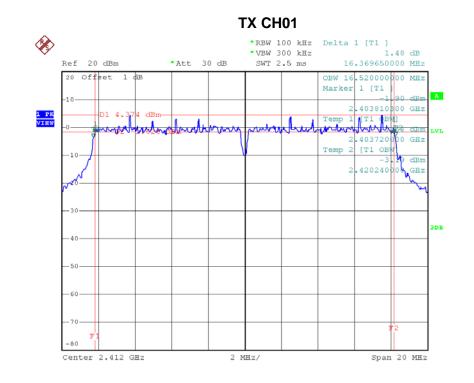
Date: 5.JUL.2016 10:30:17







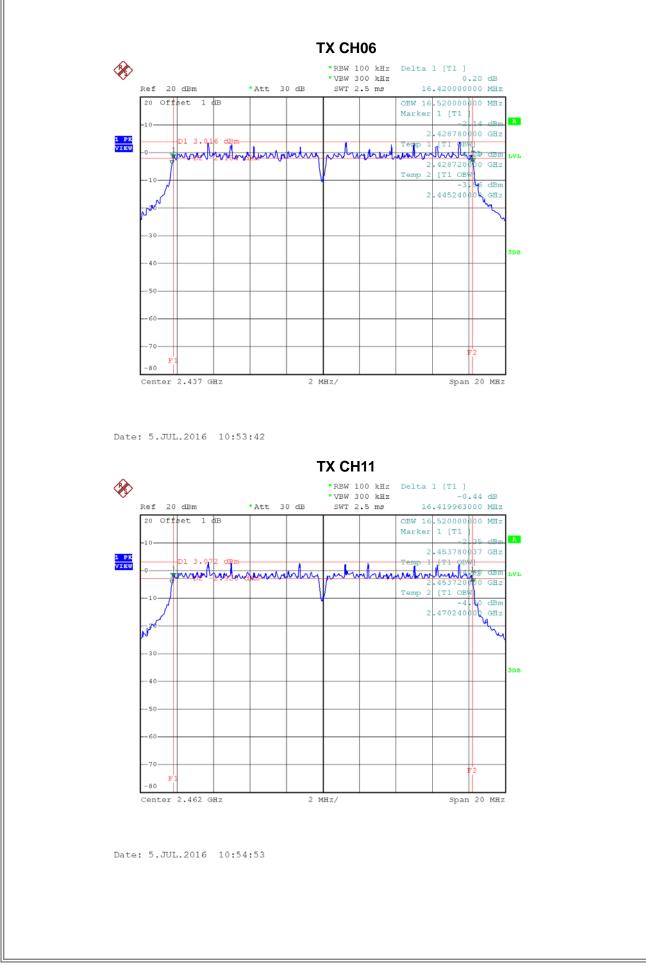
	Test Mode: TX G Mode_CH01/06/11							
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result				
2412	16.37	16.52	500	Complies				
2437	16.42	16.52	500	Complies				
2462	16.42	16.52	500	Complies				



Date: 5.JUL.2016 10:50:36

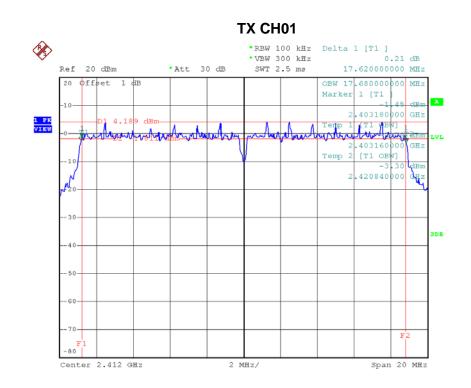
Report No.: BTL-FCCP-1-1606C194





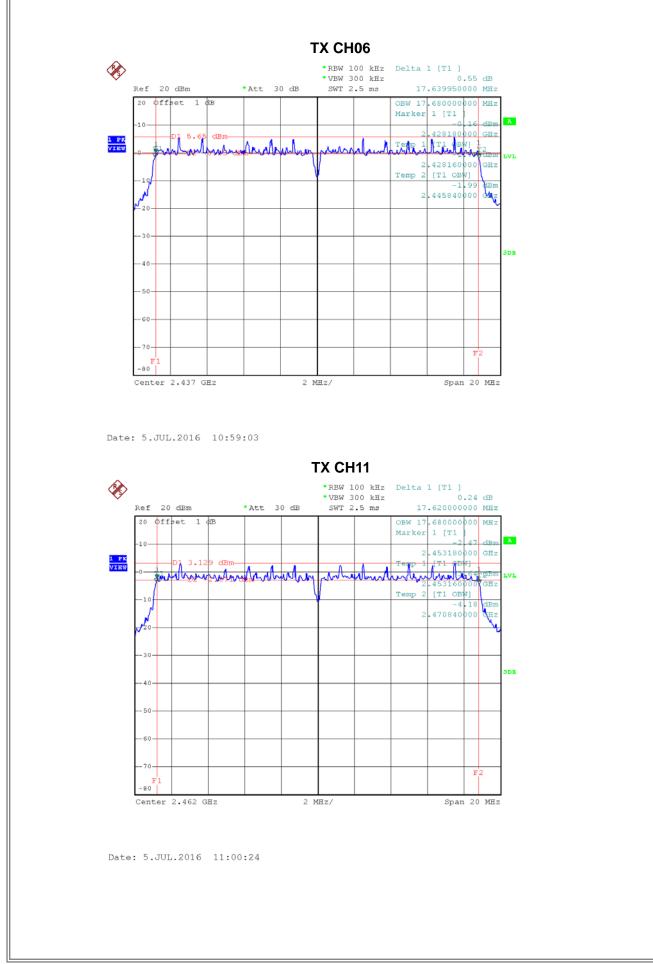


Test Mode : TX N-20MHz Mode_CH01/06/11							
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result			
2412	17.62	17.68	500	Complies			
2437	17.64	17.68	500	Complies			
2462	17.62	17.68	500	Complies			



Date: 5.JUL.2016 10:56:49

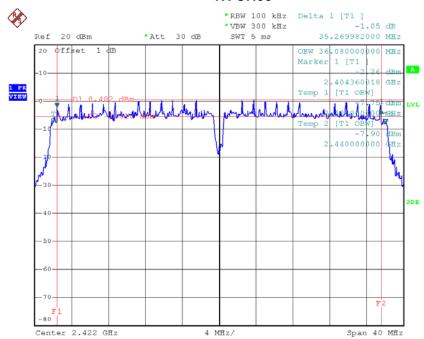






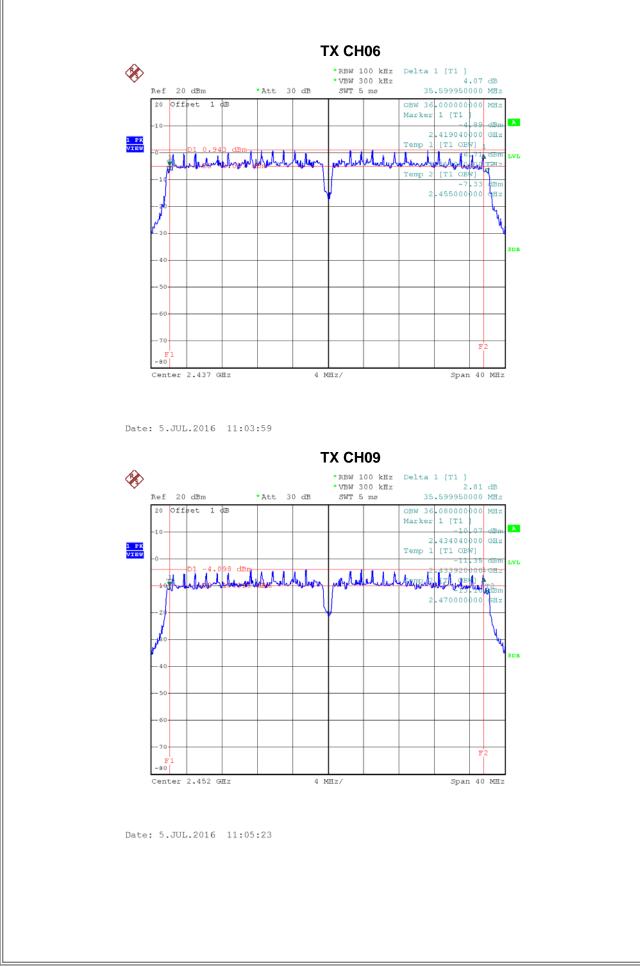
	Test Mode : TX N-40MHz Mode_CH03/06/09							
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result				
2422	35.27	36.08	500	Complies				
2437	35.60	36.00	500	Complies				
2452	35.60	36.08	500	Complies				





Date: 5.JUL.2016 11:02:16







ATTACHMENT F – MAXIMUM PEAK CONDUCTED OUTPUT POWER



Test Mode :TX B Mode_CH01/06/11_ANT 1							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	15.31	0.03	30.00	1.00	Complies		
2437	15.48	0.04	30.00	1.00	Complies		
2462	16.87	0.05	30.00	1.00	Complies		

Test Mode :TX B Mode_CH01/06/11_ANT 2							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	15.71	0.04	30.00	1.00	Complies		
2437	17.24	0.05	30.00	1.00	Complies		
2462	18.66	0.07	30.00	1.00	Complies		

Test Mode :TX G Mode_CH01/06/11_ANT 1							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	25.24	0.33	30.00	1.00	Complies		
2437	24.89	0.31	30.00	1.00	Complies		
2462	24.11	0.26	30.00	1.00	Complies		

Test Mode :TX G Mode_CH01/06/11_ANT 2							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	25.87	0.39	30.00	1.00	Complies		
2437	25.82	0.38	30.00	1.00	Complies		
2462	25.69	0.37	30.00	1.00	Complies		



Test Mode :TX N20 Mode_CH01/06/11_ANT 1						
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult	
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result	
2412	25.37	0.34	30.00	1.00	Complies	
2437	26.02	0.40	30.00	1.00	Complies	
2462	24.01	0.25	30.00	1.00	Complies	

Test Mode :TX N20 Mode_CH01/06/11_ANT 2							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	24.83	0.30	30.00	1.00	Complies		
2437	26.49	0.45	30.00	1.00	Complies		
2462	24.98	0.31	30.00	1.00	Complies		

Test Mode :TX N20 Mode_CH01/06/11_Total							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	28.12	0.65	30.00	1.00	Complies		
2437	29.27	0.85	30.00	1.00	Complies		
2462	27.53	0.57	30.00	1.00	Complies		



Test Mode :TX N40 Mode_CH03/06/09_ANT 1						
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult	
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result	
2422	23.41	0.22	30.00	1.00	Complies	
2437	23.89	0.24	30.00	1.00	Complies	
2452	19.13	0.08	30.00	1.00	Complies	

Test Mode :TX N40 Mode_CH03/06/09_ANT 2							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)			
2422	24.07	0.26	30.00	1.00	Complies		
2437	24.78	0.30	30.00	1.00	Complies		
2452	20.51	0.11	30.00	1.00	Complies		

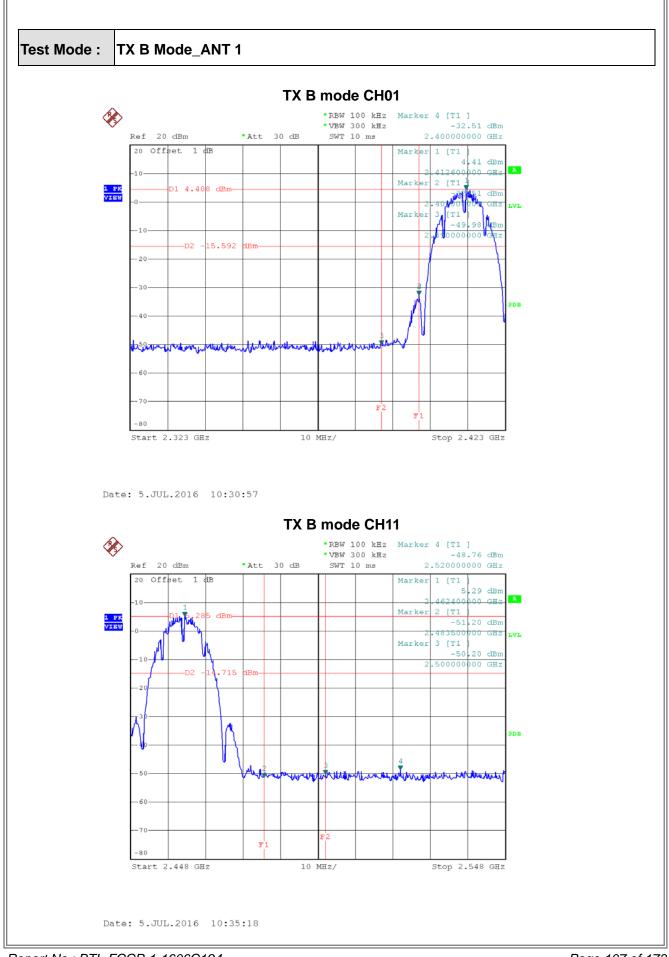
Test Mode :TX N40 Mode_CH03/06/09_Total							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)			
2422	26.76	0.47	30.00	1.00	Complies		
2437	27.37	0.55	30.00	1.00	Complies		
2452	22.88	0.19	30.00	1.00	Complies		



ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION

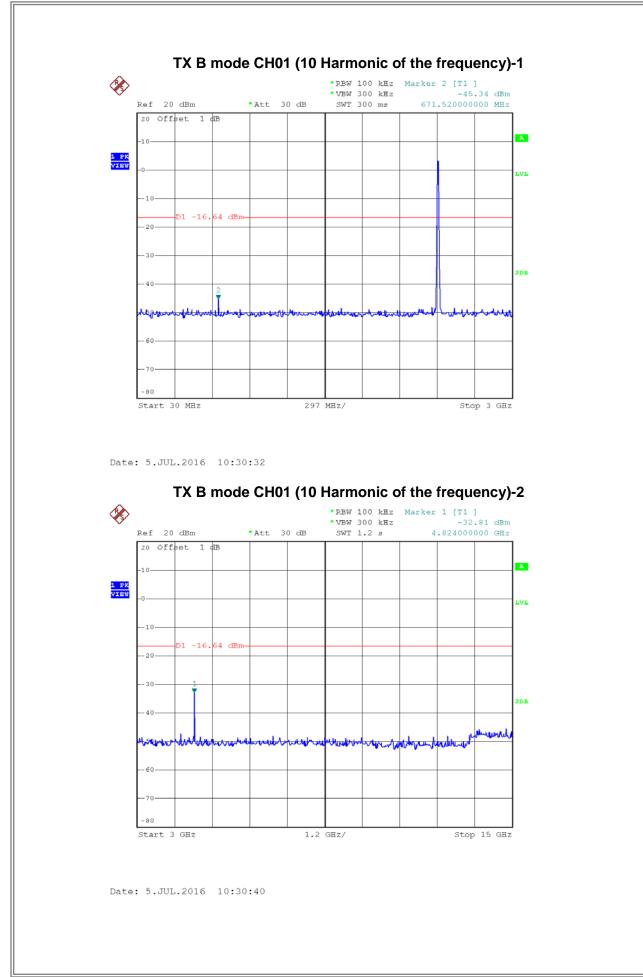




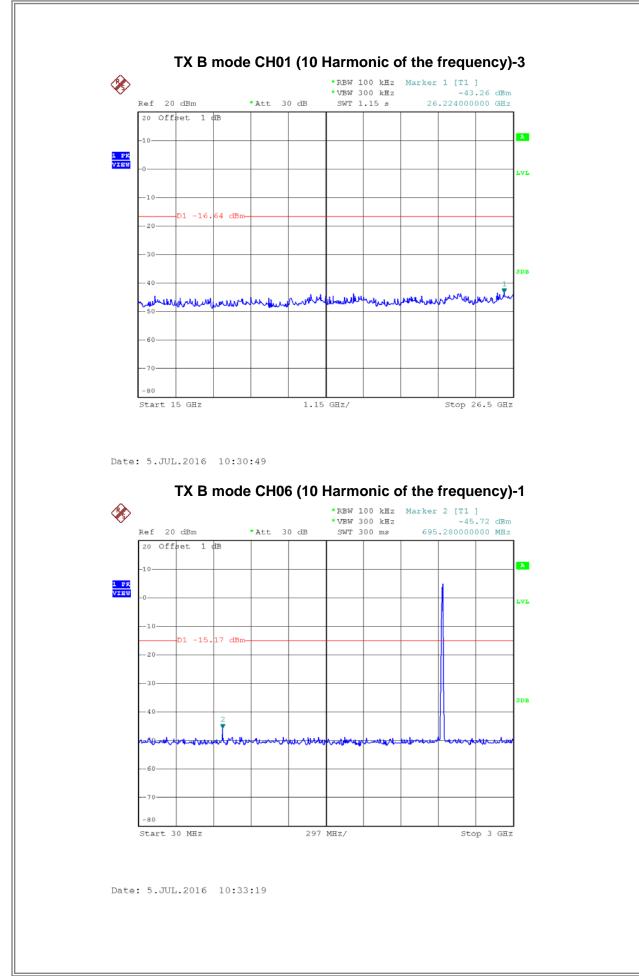


ЗĨL

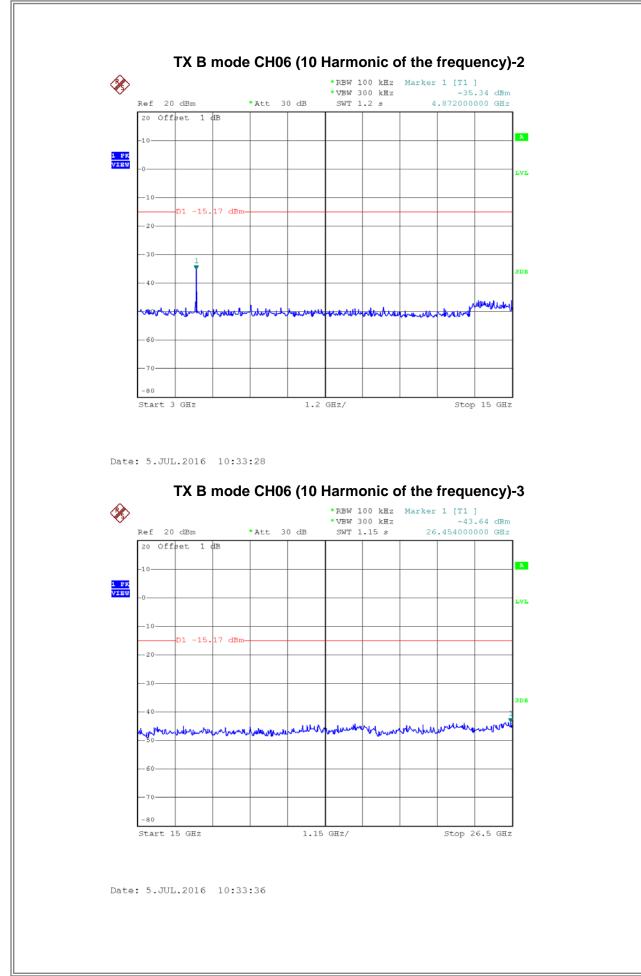




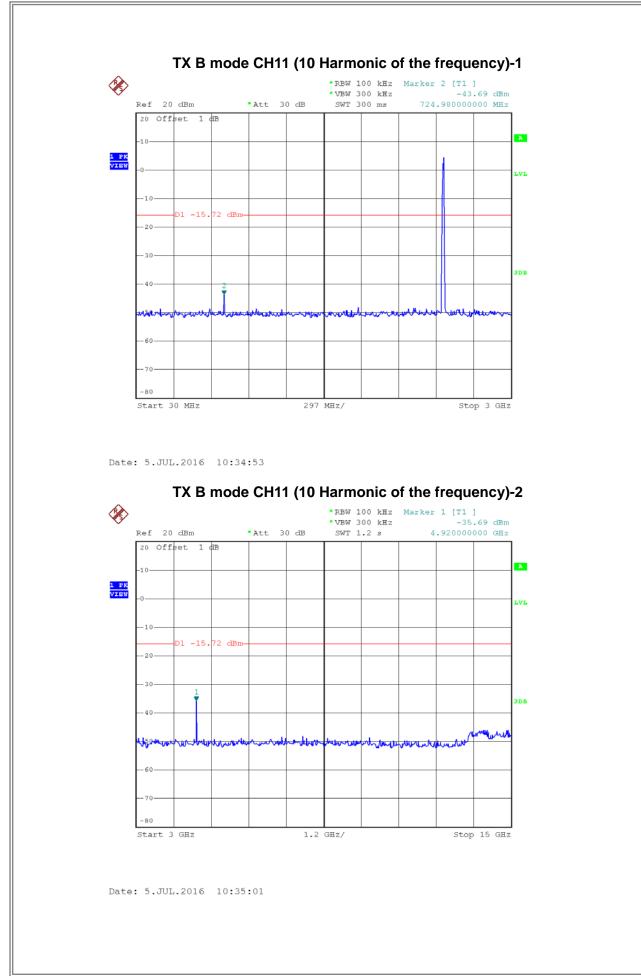




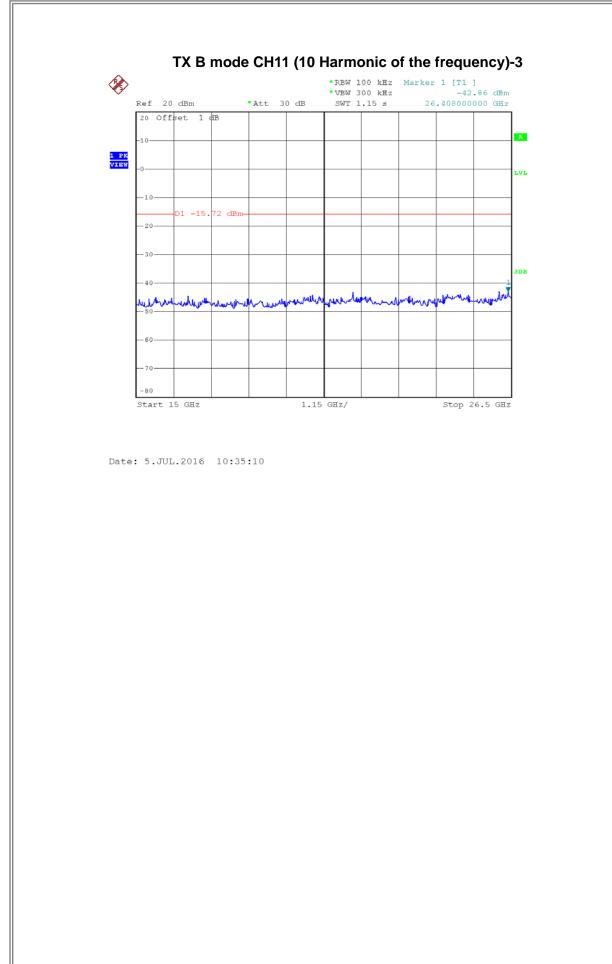






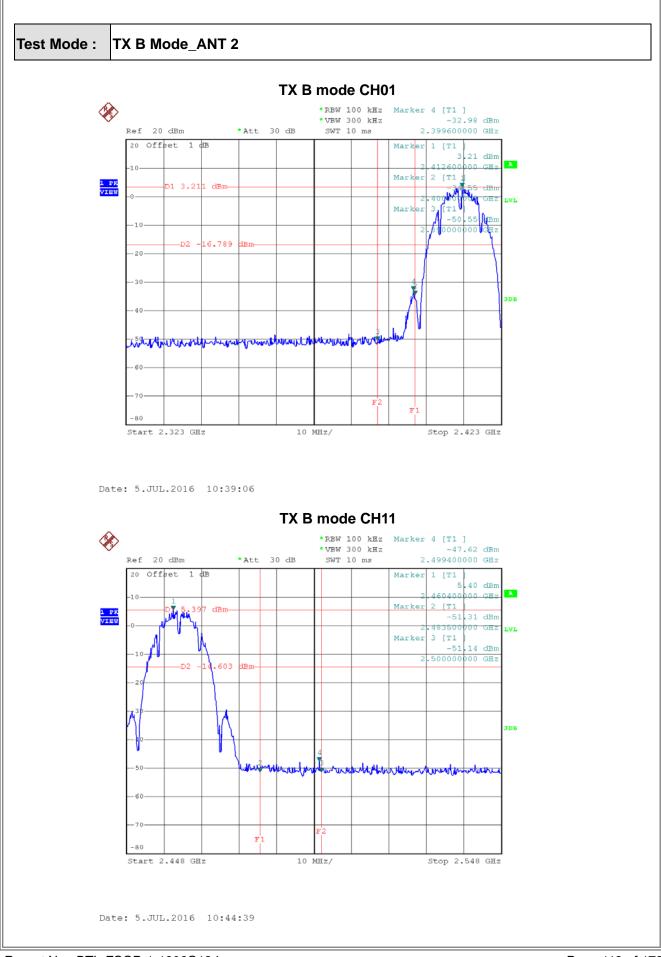




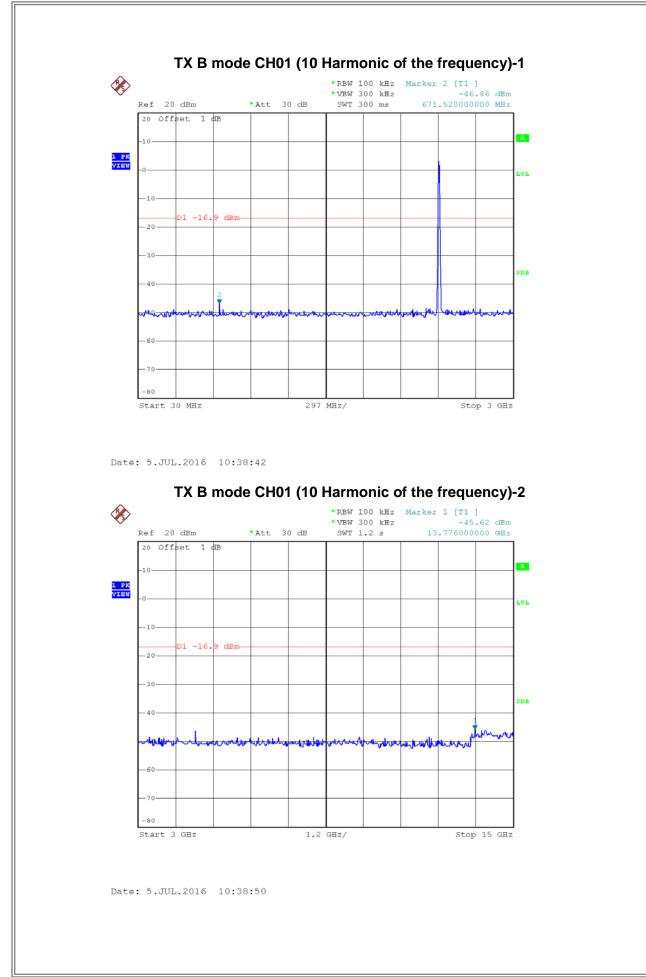




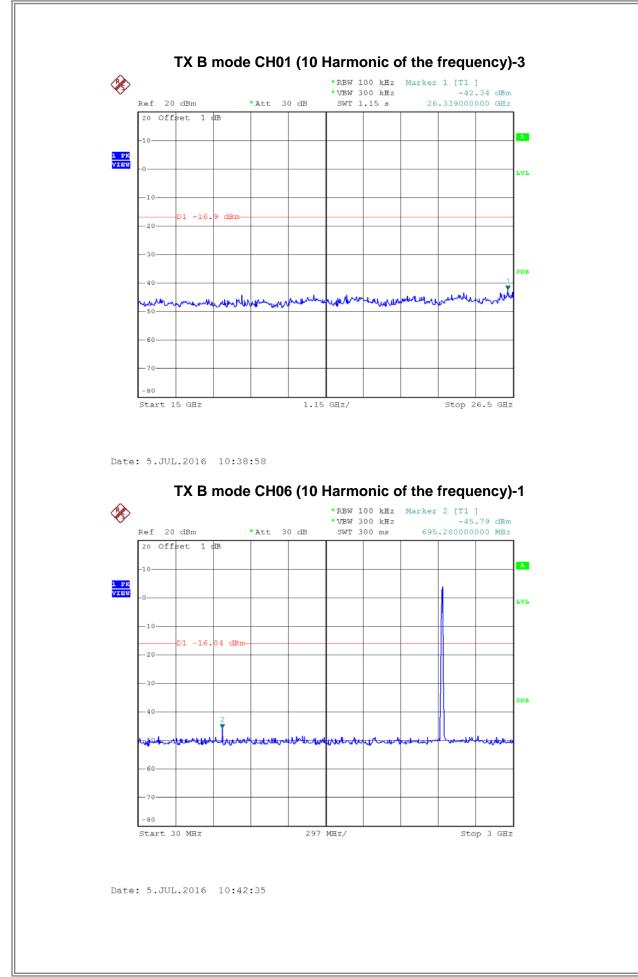




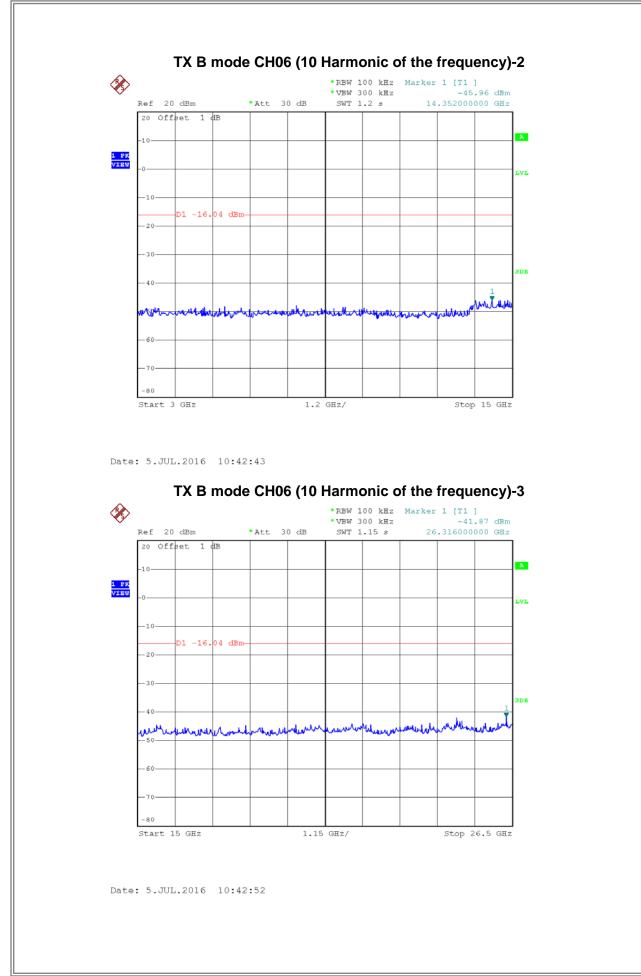




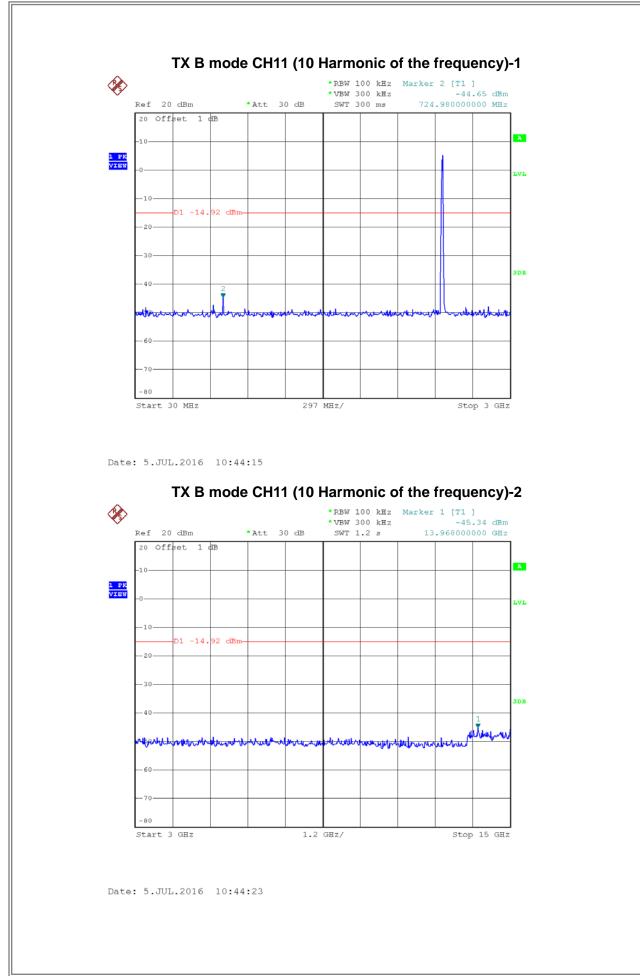




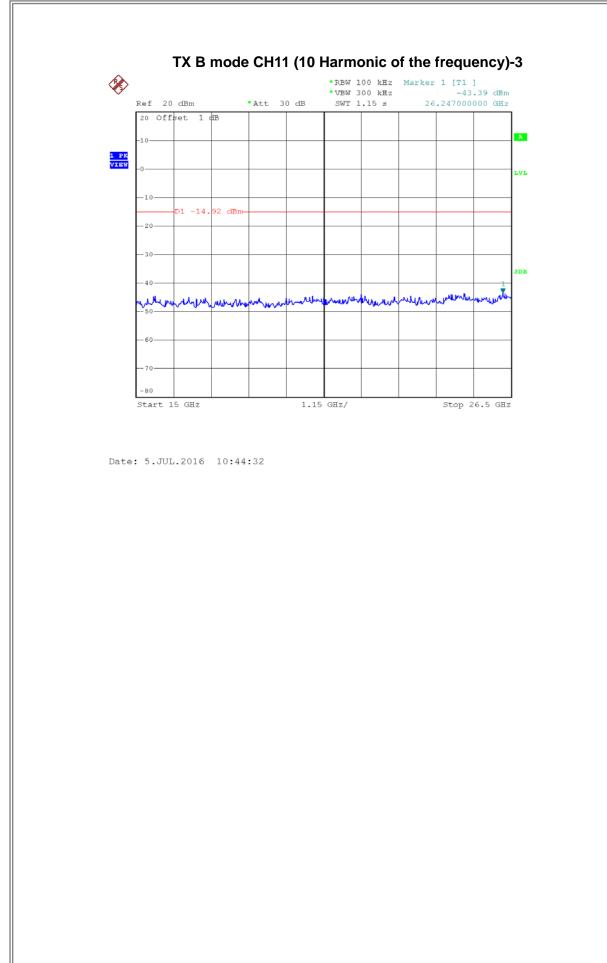






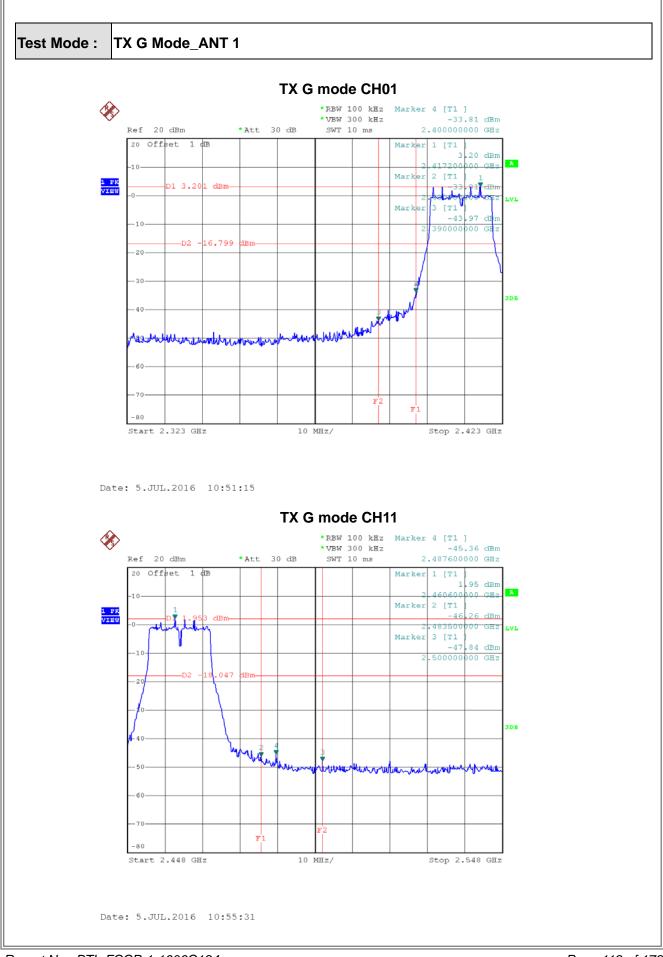




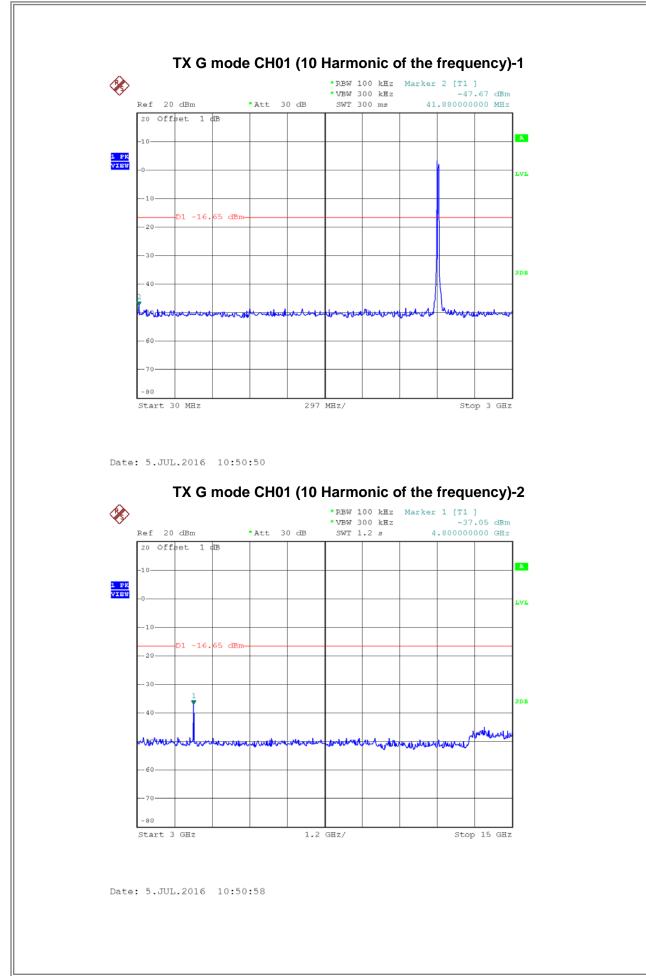




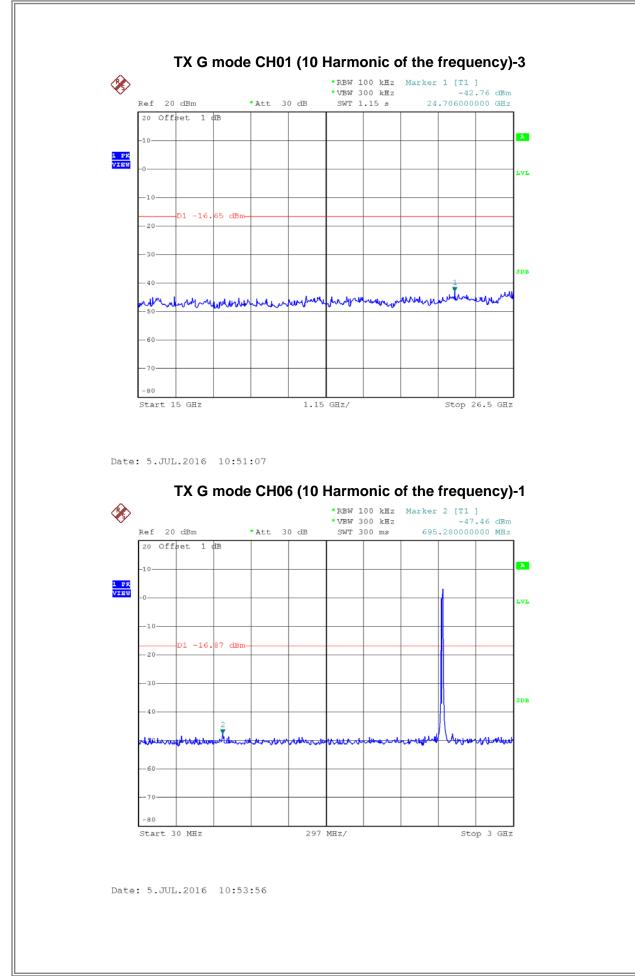




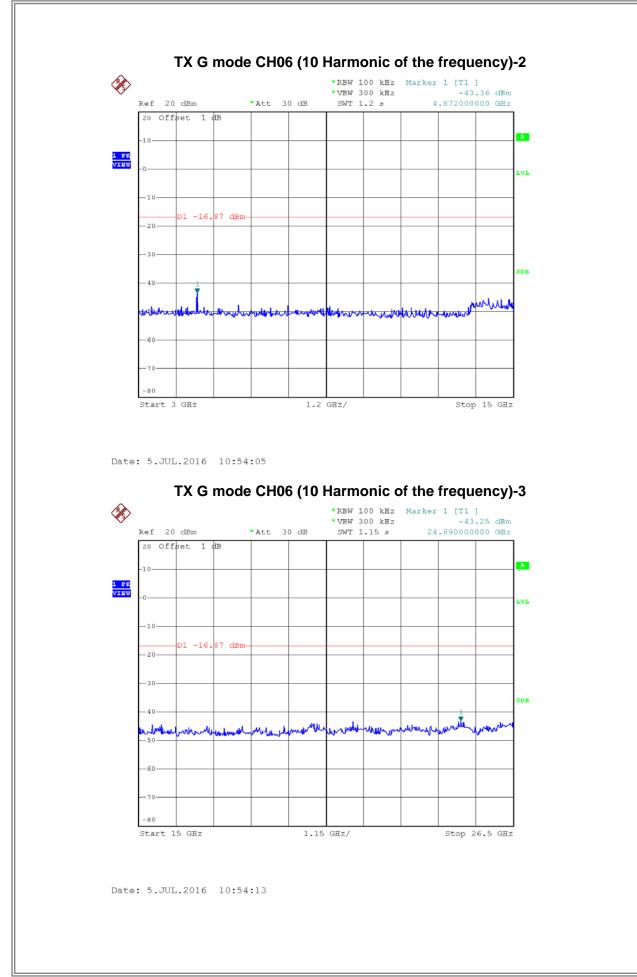




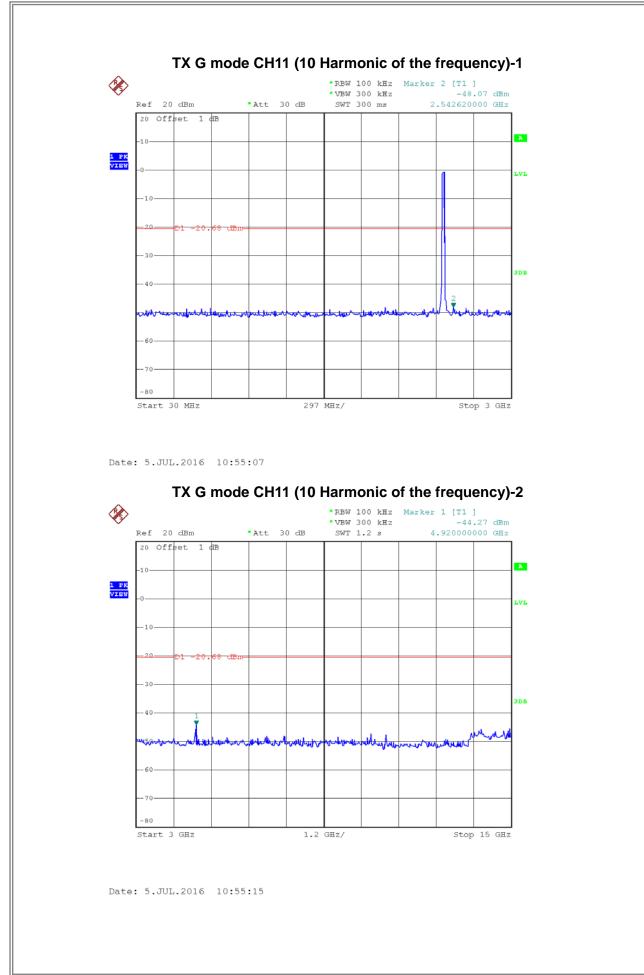




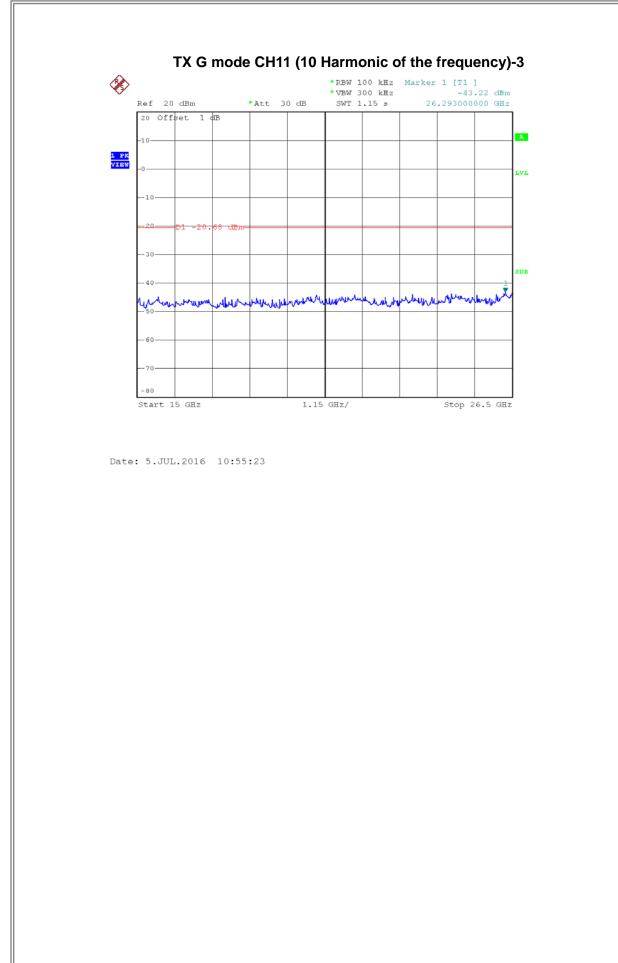






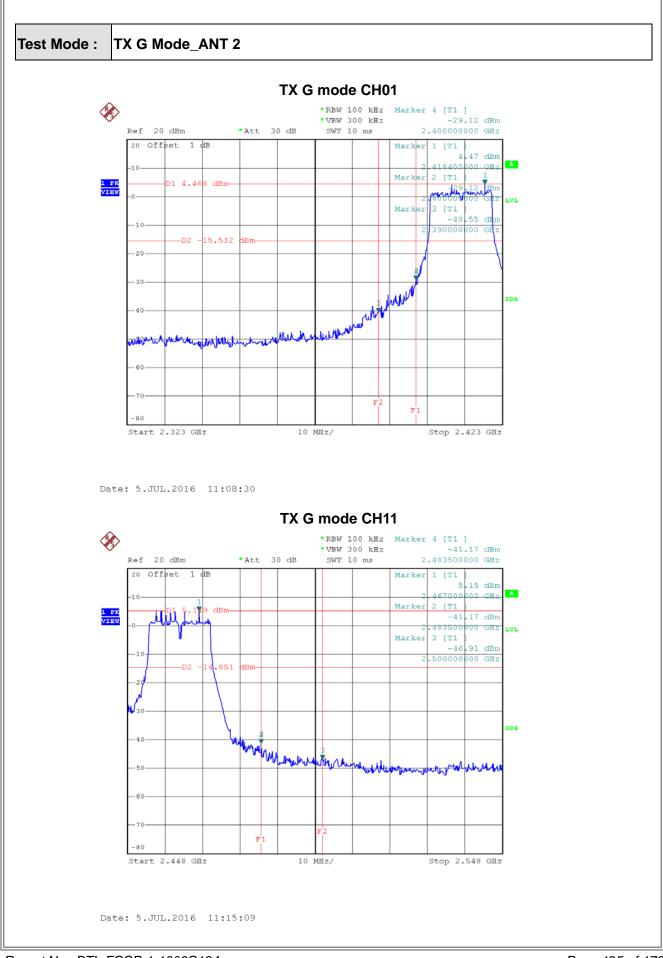




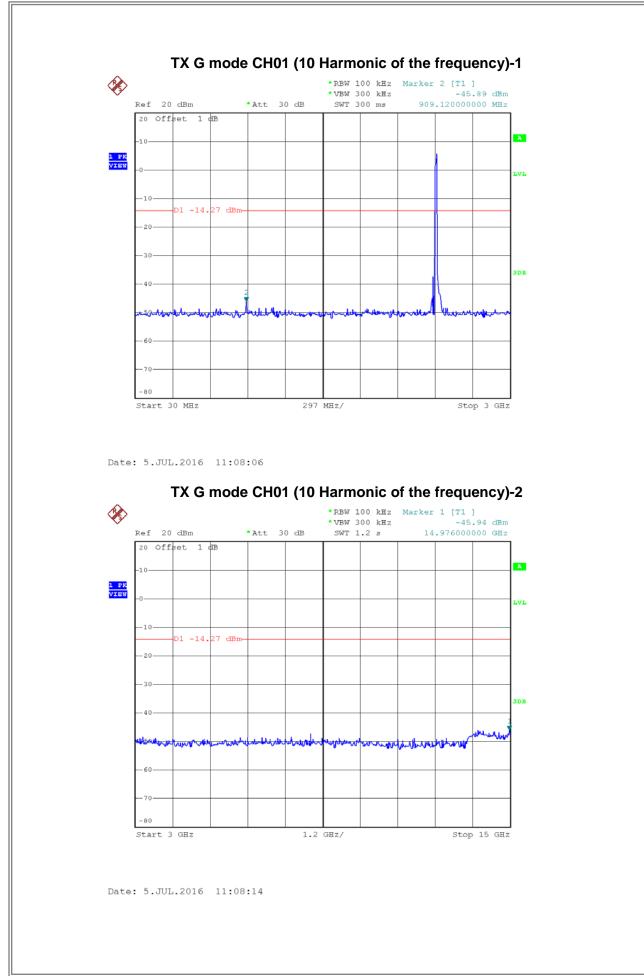






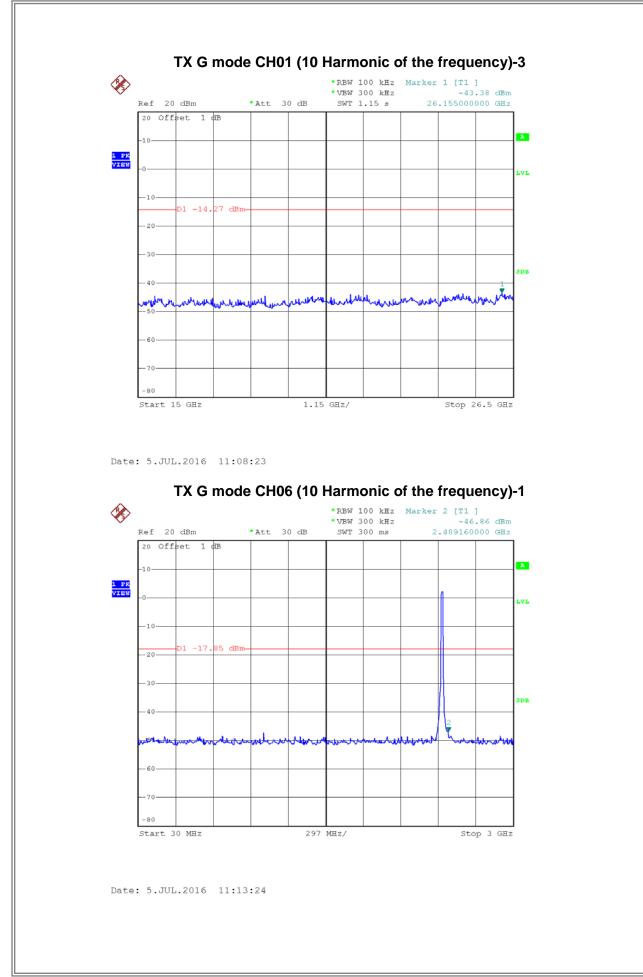




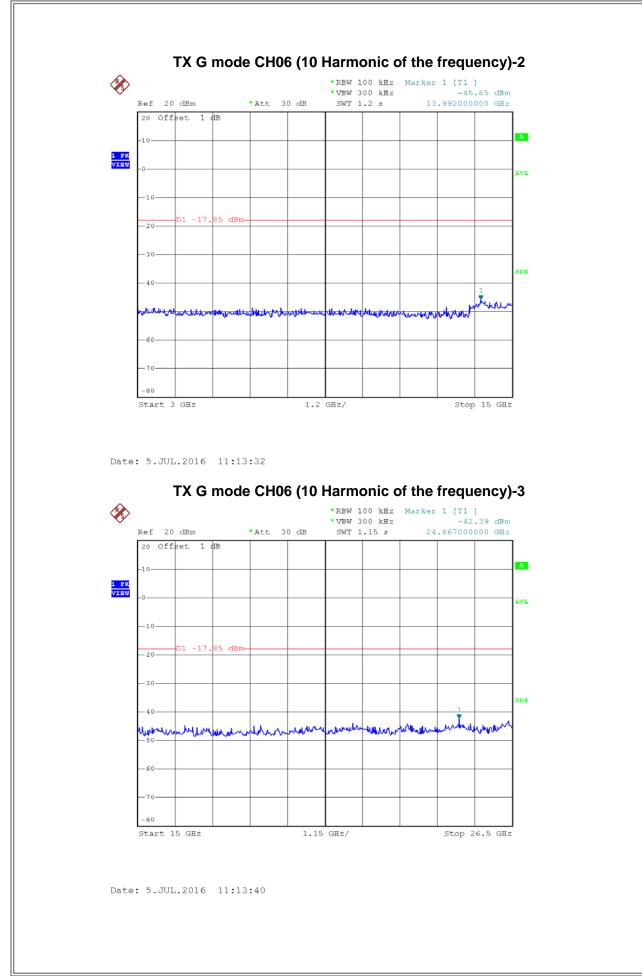


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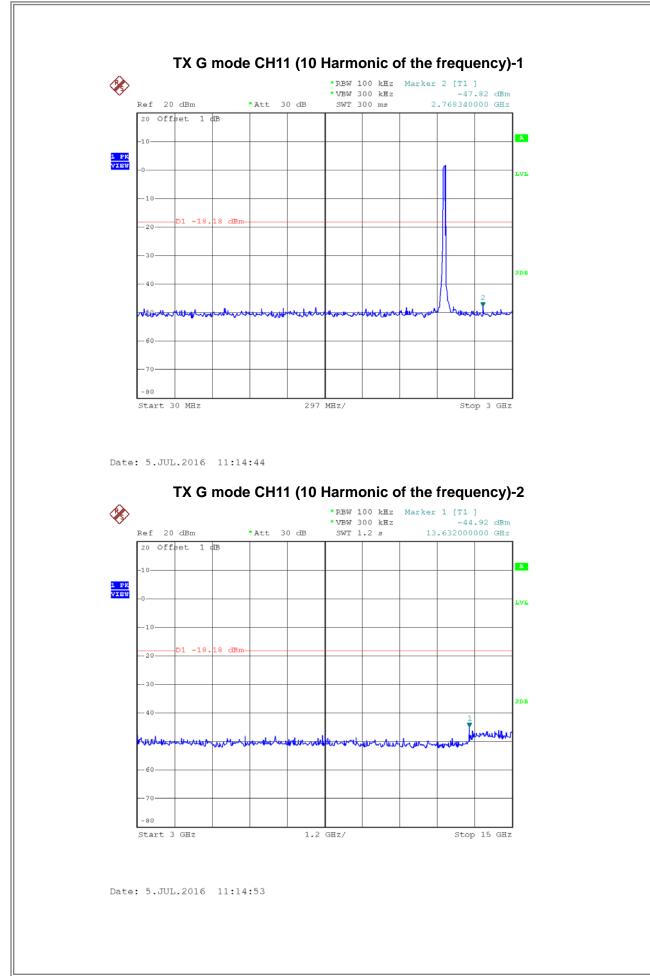












ΒĪL



