



Change

## **FCC** Radio Test Report

FCC ID: QISCMR-AL19

This report concerns (check	k one): ⊠Original Grant
Project No. Equipment Model Name Applicant Address	<ul> <li>: 1712C036</li> <li>: Tablet</li> <li>: CMR-AL19</li> <li>: Huawei Technologies Co., Ltd.</li> <li>: Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District Shenzhen China</li> </ul>
Date of Receipt Date of Test Issued Date Tested by	: Dec, 02, 2017 : Dec, 02, 2017 ~ Jan, 17, 2018 : Jan, 18, 2018 : BTL Inc.
Testing Engineer	: Shawn Xiao (Shawn Xiao)
Technical Manage	r : Seen (David Mao)
Authorized Signate	ory: David Mao

## BTL INC.

(Steven Lu)

No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

TEL: +86-769-8318-3000 FAX: +86-769-8319-6000



Report No.: BTL-FCCP-3-1712C036 Page 1 of 160





#### **Declaration**

**BTL** represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

**BTL**'s reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

**BTL**'s report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and **BTL-self**, extracts from the test report shall not be reproduced except in full with **BTL**'s authorized written approval.

**BTL**'s laboratory quality assurance procedures are in compliance with the **ISO Guide 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

#### 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.

Report No.: BTL-FCCP-3-1712C036 Page 2 of 160





Table of Contents	Page
1. CERTIFICATION	6
2 . SUMMARY OF TEST RESULTS	7
2.1 TEST FACILITY	8
2.1 TEST FACILITY  2.2 MEASUREMENT UNCERTAINTY	8
	_
3 . GENERAL INFORMATION	9
3.1 GENERAL DESCRIPTION OF EUT	9
3.2 DESCRIPTION OF TEST MODES	11
3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING	13
3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TE	
3.5 DESCRIPTION OF SUPPORT UNITS	14
4 . EMC EMISSION TEST	15
4.1 CONDUCTED EMISSION MEASUREMENT	15
4.1.1 POWER LINE CONDUCTED EMISSION LIMITS	15
4.1.2 TEST PROCEDURE 4.1.3 DEVIATION FROM TEST STANDARD	15 15
4.1.4 TEST SETUP	16
4.1.5 EUT OPERATING CONDITIONS	16
4.1.6 EUT TEST CONDITIONS 4.1.7 TEST RESULTS	16 16
4.1.7 TEST RESULTS  4.2 RADIATED EMISSION MEASUREMENT	17
4.2.1 RADIATED EMISSION MEASUREMENT  4.2.1 RADIATED EMISSION LIMITS	17
4.2.2 TEST PROCEDURE	18
4.2.3 DEVIATION FROM TEST STANDARD	18
4.2.4 TEST SETUP 4.2.5 EUT OPERATING CONDITIONS	19 21
4.2.6 EUT TEST CONDITIONS	21
4.2.7 TEST RESULTS (9KHZ TO 30MHZ)	21
4.2.8 TEST RESULTS (30MHZ TO 1000MHZ)	21 21
4.2.9 TEST RESULTS (ABOVE 1000MHZ)	
5 . BANDWIDTH TEST	22
5.1 APPLIED PROCEDURES	22
5.1.1 TEST PROCEDURE 5.1.2 DEVIATION FROM STANDARD	22 22
5.1.3 TEST SETUP	22
5.1.4 EUT OPERATION CONDITIONS	22
5.1.5 EUT TEST CONDITIONS 5.1.6 TEST RESULTS	22 22
6 . MAXIMUM PEAK CONDUCTED OUTPUT POWER TEST	23

Report No.: BTL-FCCP-3-1712C036





Table of Contents	Page
6.1 APPLIED PROCEDURES / LIMIT 6.1.1 TEST PROCEDURE 6.1.2 DEVIATION FROM STANDARD 6.1.3 TEST SETUP 6.1.4 EUT OPERATION CONDITIONS 6.1.5 EUT TEST CONDITIONS 6.1.6 TEST RESULTS	23 23 23 23 23 23 23 23
7 . ANTENNA CONDUCTED SPURIOUS EMISSION	24
7.1 APPLIED PROCEDURES / LIMIT 7.1.1 TEST PROCEDURE 7.1.2 DEVIATION FROM STANDARD 7.1.3 TEST SETUP 7.1.4 EUT OPERATION CONDITIONS 7.1.5 EUT TEST CONDITIONS 7.1.6 TEST RESULTS	24 24 24 24 24 24 24
8 . POWER SPECTRAL DENSITY TEST	25
8.1 APPLIED PROCEDURES / LIMIT 8.1.1 TEST PROCEDURE 8.1.2 DEVIATION FROM STANDARD 8.1.3 TEST SETUP 8.1.4 EUT OPERATION CONDITIONS 8.1.5 EUT TEST CONDITIONS 8.1.6 TEST RESULTS	25 25 25 25 25 25 25
9 . MEASUREMENT INSTRUMENTS LIST	26
APPENDIX A - CONDUCTED EMISSION	28
APPENDIX B - RADIATED EMISSION (9KHZ TO 30MHZ)	33
APPENDIX D - RADIATED EMISSION (ABOVE 1000MHZ)	51
APPENDIX E - BANDWIDTH	116
APPENDIX F - MAXIMUM PEAK CONDUCTED OUTPUT POWER	125
APPENDIX G - ANTENNA CONDUCTED SPURIOUS EMISSION	127
APPENDIX H - POWER SPECTRAL DENSITY	152

Report No.: BTL-FCCP-3-1712C036 Page 4 of 160





## **REPORT ISSUED HISTORY**

Issued No.	Description	Issued Date
BTL-FCCP-3-1712C036	Original Issue.	Jan, 18, 2018

Report No.: BTL-FCCP-3-1712C036 Page 5 of 160





#### 1. CERTIFICATION

Equipment : Tablet
Brand Name : HUAWEI
Model Name : CMR-AL19

Applicant : Huawei Technologies Co.,Ltd. Manufacturer : Huawei Technologies Co.,Ltd.

Address : Administration Building, Headquarters of Huawei Technologies Co., Ltd.,

Bantian, Longgang District Shenzhen China

Factory : Huawei Technologies Co.,Ltd.

Address : Administration Building, Headquarters of Huawei Technologies Co., Ltd.,

Bantian, Longgang District Shenzhen China

Date of Test : Dec. 07, 2017 ~ Jan. 17, 2018

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-3-1712C036) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP according to the ISO-17025 quality assessment standard and technical standard(s).

Test result included in this report is only for the WLAN 2.4G part.

Report No.: BTL-FCCP-3-1712C036 Page 6 of 160





## 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		
15.247(d)/ 15.205/ 15.209	Transmitter Radiated Emissions	PASS		

NOTE:

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

Report No.: BTL-FCCP-3-1712C036





#### 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: 854385 BTL's designation number for FCC: CN5020

## 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<sub>cispr</sub> 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:

Wedderent.					
Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)	
		9KHz~30MHz	V	3.79	
		9KHz~30MHz	Ι	3.57	
		30MHz ~ 200MHz	V	3.82	
DG-CB03		30MHz ~ 200MHz	Ι	3.78	
	CISPR	200MHz ~ 1,000MHz	V	4.10	
	CISER	200MHz ~ 1,000MHz	Ι	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.

Report No.: BTL-FCCP-3-1712C036 Page 8 of 160





## 3. GENERAL INFORMATION

## 3.1 GENERAL DESCRIPTION OF EUT

Equipment	Tablet		
Brand Name	HUAWEI		
Model Name	CMR-AL19		
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 150 Mbps	
	Output Power (Max.)	802.11b: 20.68dBm 802.11g: 22.21dBm 802.11n(20MHz): 21.79dBm 802.11n(40MHz): 20.46dBm	
Power Source	#1 Supplied from AC/DC adapter. #2 Battery Supplied.		
Power Rating	#1 Input: 100V~240V AC and 50/60 Hz,0.5A Output: 5V = -2A OR 9V = -2A #2 = -3.82V 7350mAh		
Hardware Version	SH1CMRONLM		
Softwarre Version	CMR-AL19 8.0.1.3(SP1C331)		

## 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)	Note
1	N/A	N/A	N/A	Internal	N/A	-0.5

Report No.: BTL-FCCP-3-1712C036 Page 9 of 160





4.

Item	Mfr/Brand	Model.
	SCUD (FUJIAN) Electronics Co., Ltd	HB2994I8ECW
Battery	Sunwoda Electronic Co., LTD.	HB2994I8ECW
	Huizhou Desay Battery Co., Ltd	HB2994I8ECW
	HONGLIN TECHNOLOGY CO.,LTD	130-26988
	Luxshare Precision Industry Co., Ltd	L99UC001-CS-H
USB Cable	FOXCONN INTERCONNECT	CUDUOAD LICOSO ELI
	TECHNOLOGY LIMITED	CUDU01B-HC288-EH
	foxlink cheng uei precision industry Co., Ltd	6691-10YZ-0183
	FOSTER ELECTRIC CO. (HONG KONG)	620904
LIOD Torres	LTD	620891
USB Type-C	Boluo County Quancheng Electronic	6004 7004 TC 204
to 3.5 mm	Co.,Ltd.	6001-7001-TC-294
headset jack	Jiangxi Lianchuang Hongsheng Electronic	HWTYPEC3R5009AW
adapter cable	Co.,LTD	HVVITPECSRSUU9AVV
	MERRY ELECTRONICS CO., LTD.	L99UD002-CS-H
Adoptor	Salcomp (Shenzhen) Co., Ltd.	11/1/ 05030011110
Adapter	HUIZHOU BYD ELECTRONIC CO.,LTD	HW-059200UHQ

Report No.: BTL-FCCP-3-1712C036 Page 10 of 160





## 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	Normal Link	

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	Normal Link	

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

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

Report No.: BTL-FCCP-3-1712C036 Page 11 of 160





6dB Spectrum Bandwidth		
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	

Maximum Conducted Output Power		
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	

Power Spectral Density		
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 (6.5Mbps) 802.11n HT40 mode : BPSK (13.5Mbps)

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%.

Report No.: BTL-FCCP-3-1712C036 Page 12 of 160





## 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

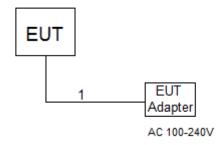
Test software version	WiFiRFAuth.apk		
Frequency (MHz)	2412	2437	2462
802.11b	16	16	16
802.11g	11	11	11
802.11n (20MHz)	10	10	10
Frequency (MHz)	2422	2437	2452
802.11n (40MHz)	8	8	8

Report No.: BTL-FCCP-3-1712C036 Page 13 of 160





## 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	NO	NO	1.2m	DC Cable

Report No.: BTL-FCCP-3-1712C036 Page 14 of 160





#### 4. EMC EMISSION TEST

#### 4.1 CONDUCTED EMISSION MEASUREMENT

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

Fraguency 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 equipment 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

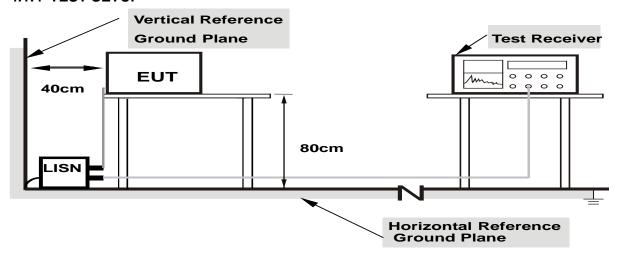
No deviation

Report No.: BTL-FCCP-3-1712C036 Page 15 of 160





## 4.1.4 TEST SETUP



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

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

#### 4.1.5 EUT OPERATING CONDITIONS

The EUT was placed on the test table and programmed in normal function.

## **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 Appendix A.

Report No.: BTL-FCCP-3-1712C036





#### 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)	Band edge at 3	3m (dBµV/m)	Harmonic at 1.5m (dBµV/m)		
	Peak	Average	Peak	Average	
Above 1000	74	54	80 (Note 5)	60(Note 5)	

#### 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

(5) 
$$FS_{\text{limit}} = FS_{\text{max}} - 20\log\left(\frac{d_{\text{limit}}}{d_{\text{measure}}}\right)$$

20log d limit/d measure=20log 3/1.5=6dB.





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 or 1.5m 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 radiated 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)
- h. 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

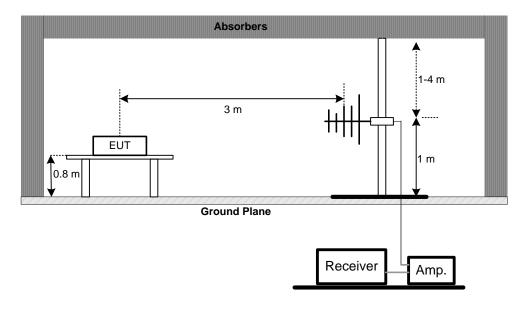
Report No.: BTL-FCCP-3-1712C036 Page 18 of 160





## 4.2.4 TEST SETUP

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

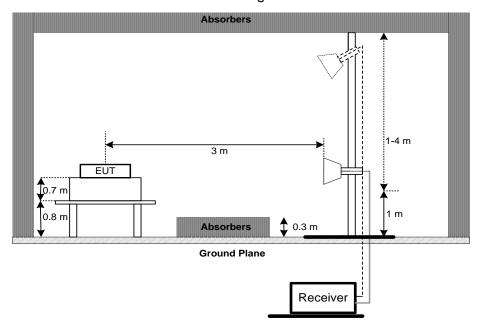


Report No.: BTL-FCCP-3-1712C036

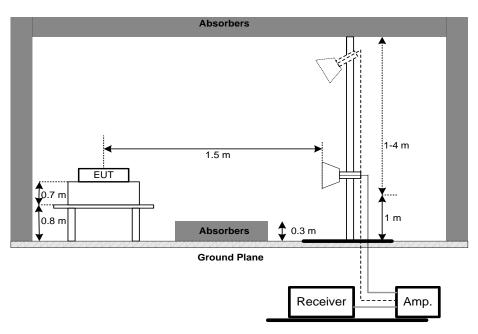




# (B) Radiated Emission Test Set-Up Frequency Above 1 GHz Band edge



## Harmonic

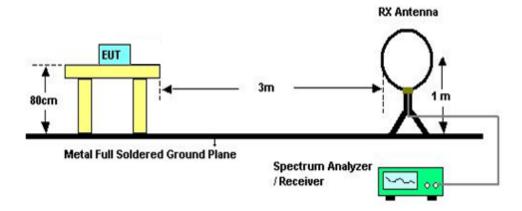


Report No.: BTL-FCCP-3-1712C036 Page 20 of 160





## (C) For Radiated Emissions Below 30MHz



#### 4.2.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

## 4.2.6 EUT TEST CONDITIONS

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

## 4.2.7 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Appendix 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 1000MHZ)**

Please refer to the Appendix C.

## 4.2.9 TEST RESULTS (ABOVE 1000MHZ)

Please refer to the Appendix D.

#### Remark:

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

Report No.: BTL-FCCP-3-1712C036 Page 21 of 160





## 5. BANDWIDTH TEST

#### **5.1 APPLIED PROCEDURES**

FCC Part15 (15.247) , Subpart C					
Section Test Item 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 Appendix E.

Report No.: BTL-FCCP-3-1712C036 Page 22 of 160





## 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.

#### 6.1.2 DEVIATION FROM STANDARD

No deviation.

## 6.1.3 TEST SETUP

EUT		Power Meter
		1 OWEL WICKE

## **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 Appendix F.

Report No.: BTL-FCCP-3-1712C036 Page 23 of 160





#### 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

EUT		SPECTRUM	
		ANALYZER	

#### 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 Appendix G.

Report No.: BTL-FCCP-3-1712C036 Page 24 of 160





## 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 Appendix H.

Report No.: BTL-FCCP-3-1712C036 Page 25 of 160





## 9. MEASUREMENT INSTRUMENTS LIST

	Conducted Emission						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	EMI Test Receiver	R&S	ESCI	100382	Mar. 26, 2018		
2	LISN	EMCO	3816/2	52765	Mar. 26, 2018		
3	50Ω Terminator	SHX	TF2-3G-A	8122901	Mar. 26, 2018		
4	TWO-LINE V-NETWORK	R&S	ENV216	101447	Mar. 26, 2018		
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A		
6	Cable	N/A	RG223	12m	Oct. 19, 2018		

	Radiated Emission Below 1GHz						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	Antenna	Schwarbeck	VULB9160	9160-3232	Mar. 26, 2018		
2	Amplifier	HP	8447D	2944A09673	Oct. 19, 2018		
3	Receiver	Agilent	N9038A	MY52130039	Aug. 20, 2018		
4	Cable	emci	LMR-400(30MHz-1 GHz)(8m+5m)	N/A	Jun. 26, 2018		
5	Controller	CT	SC100	N/A	N/A		
6	Controller	MF	MF-7802	MF780208416	N/A		
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A		
8	Antenna	EM	EM-6876-1	230	Mar. 06, 2018		

Report No.: BTL-FCCP-3-1712C036 Page 26 of 160





	Radiated Emission Above 1GHz									
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until					
1	Double Ridged Guide Antenna	ETS	3115	75789	Mar. 26, 2018					
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 08, 2018					
3	Amplifier	Agilent	8449B	3008A02274	May. 16, 2018					
4	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 26, 2018					
5	Receiver	Agilent	N9038A	MY52130039	Aug. 20, 2018					
6	Antenna	EM	EM-6876-1	230	Mar. 06, 2018					
7	Controller	СТ	SC100	N/A	N/A					
8	Controller	MF	MF-7802	MF780208416	N/A					
9	Cable	emci	EMC104-SM-SM-1 2000(12m)	N/A	Jun. 26, 2018					
10	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A					

	6dB Bandwidth									
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until					
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 20, 2018					

	Peak Output Power									
Item	Calibrated until									
1	Power Meter	ANRITSU	ML2495A	1128009	Mar. 26, 2018					
2	Pulse Power Sensor	ANRITSU	MA 2411B	1027500	Mar. 26, 2018					

	Antenna Conducted Spurious Emission									
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until					
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 20, 2018					

	Power Spectral Density									
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until					
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 20, 2018					

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

All calibration period of equipment list is one year.

Report No.: BTL-FCCP-3-1712C036 Page 27 of 160





<b>APPENDIX</b>	A - (	COND	JCTED	<b>EMISS</b>	ION

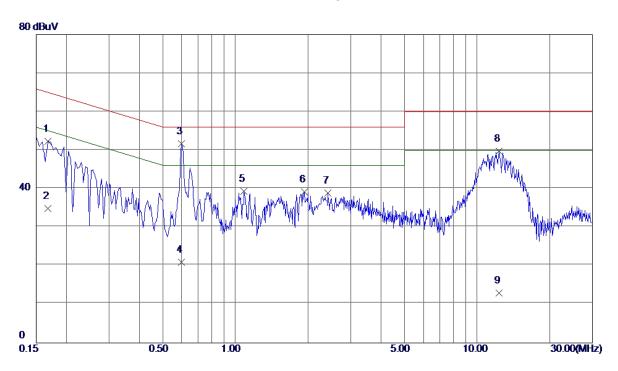
Report No.: BTL-FCCP-3-1712C036 Page 28 of 160





Test Mode: TX Mode\_ Adapter: BYD

## Line



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1680	42. 55	9. 78	52. 33	<b>65.06</b>	-12.73	Peak	
2	0.1680	25. 10	9. 78	34.88	55. <b>06</b>	-20. 18	AVG	
3 *	0.6000	41.82	9.81	51.63	<b>56.00</b>	-4. 37	Peak	
4	0.6000	11. 20	9.81	21.01	46.00	-24.99	AVG	
5	1.0859	29. 51	9.85	39. 36	<b>56.00</b>	-16.64	Peak	
6	1.9320	29. 29	9. 92	39. 21	56.00	-16. 79	Peak	
7	2.4180	28. 96	9.96	38. 92	<b>56.00</b>	-17.08	Peak	
8	12. 3315	39. 33	10.45	49. 78	60.00	-10. 22	Peak	
9	12. 3315	2. 50	10.45	12. 95	50.00	-37. 05	AVG	

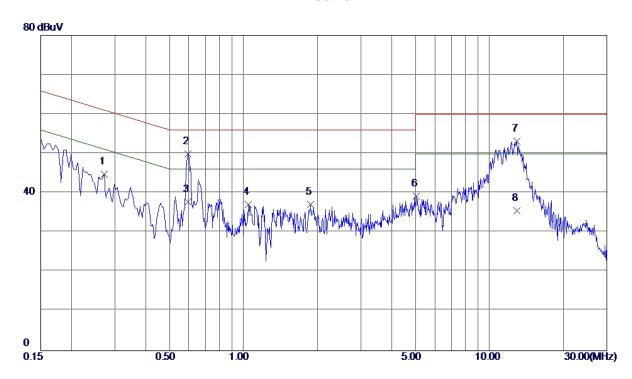
Report No.: BTL-FCCP-3-1712C036 Page 29 of 160





Test Mode: TX Mode\_ Adapter: BYD

## Neutral



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.2714	35. 16	9. 67	44.83	61.07	-16. 24	Peak	
2 *	0. 5955	40. 18	9.71	49.89	56.00	-6. 11	Peak	
3	0. 5955	28.00	9.71	37.71	46.00	-8. 29	AVG	
4	1.0455	27. 39	9. 75	37. 14	56.00	-18.86	Peak	
5	1.8780	27. 27	9.83	37. 10	56.00	-18. 90	Peak	
6	5. 0324	29. 18	10.01	39. 19	60.00	-20.81	Peak	
7	12.8940	42.67	10.48	53. 15	60.00	<b>-6.</b> 85	Peak	
8	12.8940	25. 09	10.48	35. 57	50.00	-14. 43	AVG	

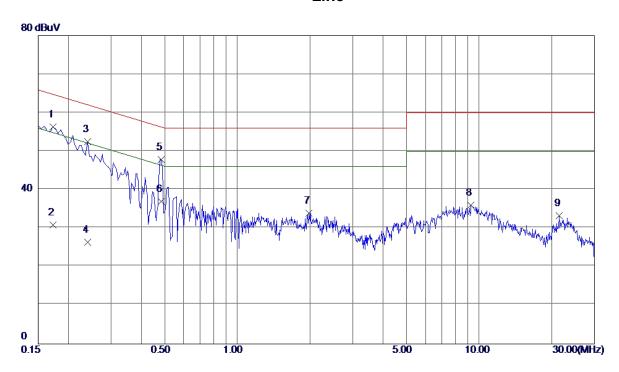
Report No.: BTL-FCCP-3-1712C036 Page 30 of 160





Test Mode: TX Mode\_ Adapter: Salcomp

## Line



No.	Freq.	Keading Level	Correct Factor	measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1725	46. 49	9. 78	56. 27	64.84	-8. 57	Peak	
2	0.1725	21. 10	9. 78	30.88	54.84	-23.96	AVG	
3	0.2400	42.74	9. 76	52. 5 <b>0</b>	62. 10	-9. 60	Peak	
4	0.2400	16.60	9. 76	26. 36	52. 10	-25.74	AVG	
5 *	0.4830	38.06	9.80	47.86	56. 29	-8.43	Peak	
6	0.4830	27. 20	9.80	37.00	46. 29	-9. 29	AVG	
7	1.9815	24.07	9. 92	33. 99	56.00	-22.01	Peak	
8	9. 2670	25. 76	10. 29	36. 05	60.00	-23.95	Peak	
9	21. 4845	22. 54	10. 69	33. 23	60.00	-26.77	Peak	

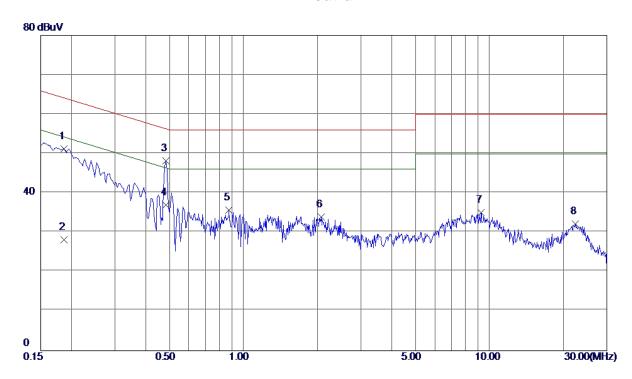
Report No.: BTL-FCCP-3-1712C036 Page 31 of 160





Test Mode: TX Mode\_ Adapter: Salcomp

## **Neutral**



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1860	41.58	9. 69	51. 27	64.21	-12.94	Peak	
2	0.1860	18. 50	9. 69	28. 19	54.21	<b>-26.02</b>	AVG	
3 *	0.4830	38.48	9. 70	48. 18	56. 29	-8. 11	Peak	
4	0.4830	27. 20	9. 70	36. 90	46. 29	-9. 39	AVG	
5	0.8745	25.96	9. 73	35. 69	56.00	-20. 31	Peak	
6	2.0670	24.02	9. 85	33. 87	56.00	-22. 13	Peak	
7	9. 2265	24.85	10. 23	35. 08	60.00	-24.92	Peak	
8	22. 3395	21. 37	10.84	32. 21	60.00	-27.79	Peak	

Report No.: BTL-FCCP-3-1712C036 Page 32 of 160





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

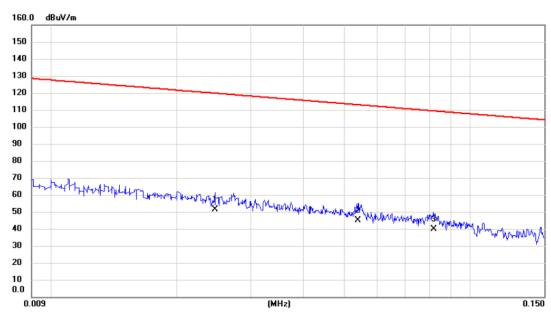
Report No.: BTL-FCCP-3-1712C036 Page 33 of 160





Test Mode: TX Mode \_Adapter: BYD

Ant 0°



No. Mk	. Freq.	Reading Level		Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.0246	31.82	19.48	51.30	119.79	-68.49	AVG	
2 *	0.0540	26.18	18.64	44.82	112.96	-68.14	AVG	
3	0.0817	21.62	18.07	39.69	109.36	-69.67	AVG	

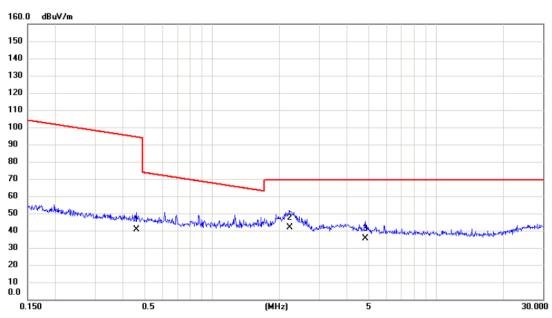
Report No.: BTL-FCCP-3-1712C036 Page 34 of 160





Test Mode: TX Mode\_ Adapter: BYD

## Ant 0°



No. Mk.	Freq.	Reading Level		Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.4588	24.03	16.50	40.53	94.37	-53.84	AVG	
2 *	2.2132	26.19	15.45	41.64	69.54	-27.90	QP	
3	4.8224	20.85	14.48	35.33	69.54	-34.21	QP	

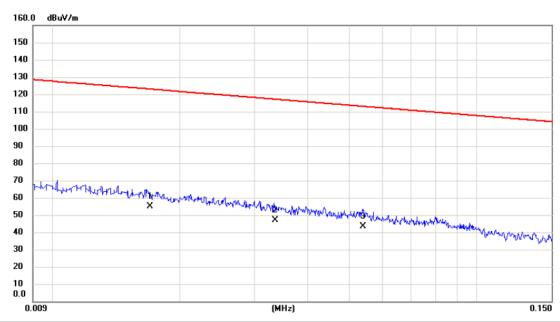
Report No.: BTL-FCCP-3-1712C036 Page 35 of 160





Test Mode: TX Mode \_ Adapter: BYD

## Ant 90°



No.	Mk.	Freq.	Reading Level		Measure- ment		Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0170	35.08	20.01	55.09	123.00	-67.91	AVG	
2		0.0335	27.94	19.22	47.16	117.10	-69.94	AVG	
3		0.0540	24.70	18.64	43.34	112.96	-69.62	AVG	

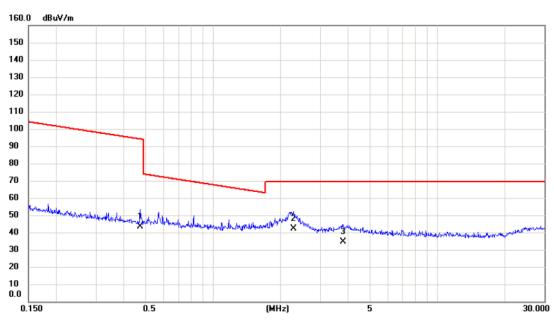
Report No.: BTL-FCCP-3-1712C036 Page 36 of 160





Test Mode: TX Mode\_ Adapter: BYD

# Ant 90°



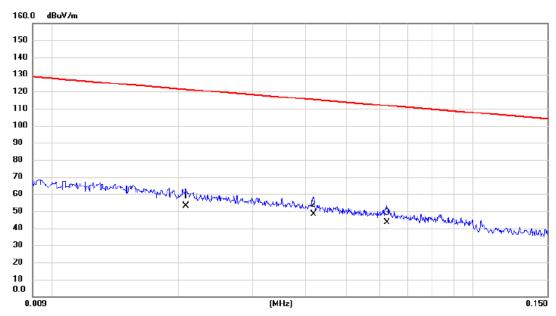
No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.4736	26.77	16.49	43.26	94.10	-50.84	AVG	
2 *	2.2847	26.60	15.43	42.03	69.54	-27.51	QP	
3	3.7994	19.57	15.01	34.58	69.54	-34.96	QP	

Report No.: BTL-FCCP-3-1712C036 Page 37 of 160





# Ant 0°



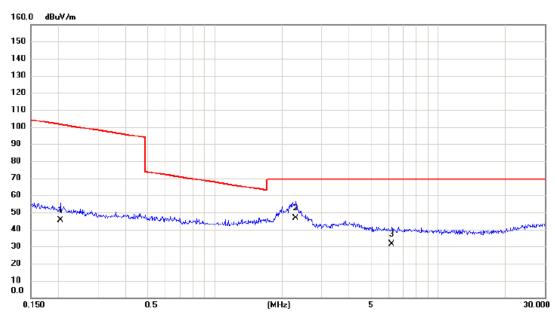
No. Mk.	Freq.			Measure- ment		Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.0208	33.46	19.60	53.06	121.24	-68.18	AVG	
2 *	0.0418	29.27	18.97	48.24	115.18	-66.94	AVG	
3	0.0624	24.90	18.48	43.38	111.70	-68.32	AVG	

Report No.: BTL-FCCP-3-1712C036 Page 38 of 160





Ant 0°



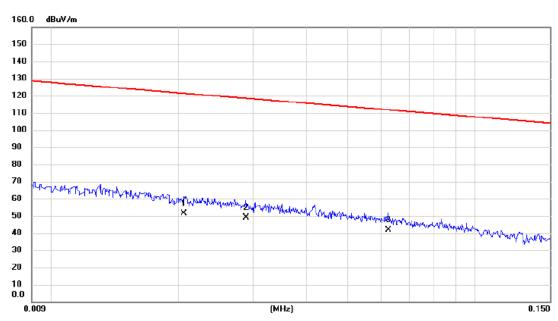
No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.2040	28.66	16.79	45.45	101.41	-55.96	AVG	
2 *	2.2968	30.99	15.43	46.42	69.54	-23.12	QP	
3	6.1860	17.36	14.22	31.58	69.54	-37.96	QP	

Report No.: BTL-FCCP-3-1712C036 Page 39 of 160





# Ant 90°



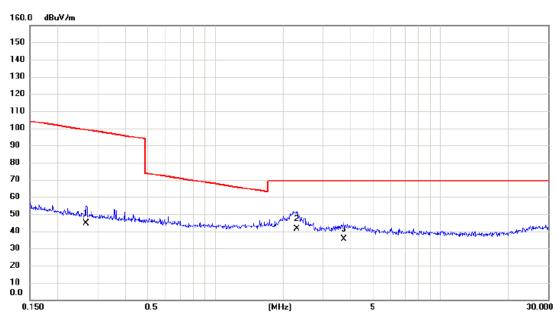
No. Mk.	Freq.			Measure- ment		Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.0206	31.94	19.60	51.54	121.33	-69.79	AVG	
2 *	0.0288	29.49	19.36	48.85	118.42	-69.57	AVG	
3	0.0624	23.34	18.48	41.82	111.70	-69.88	AVG	

Report No.: BTL-FCCP-3-1712C036 Page 40 of 160





# Ant 90°



No. Mk.	Freq.			Measure- ment		Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.2672	28.05	16.65	44.70	99.07	-54.37	AVG	
2 *	2.2968	25.92	15.43	41.35	69.54	-28.19	QP	
3	3.7198	20.20	15.02	35.22	69.54	-34.32	QP	

Report No.: BTL-FCCP-3-1712C036 Page 41 of 160





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

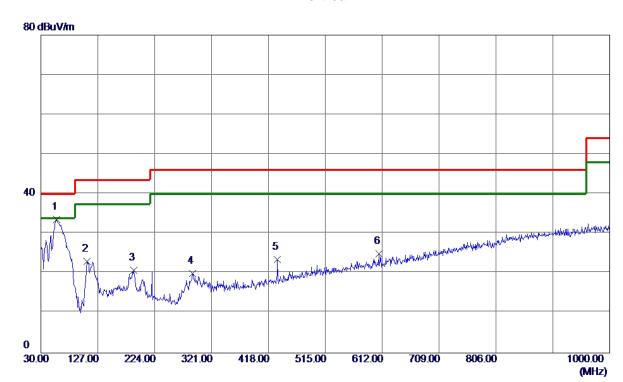
Report No.: BTL-FCCP-3-1712C036 Page 42 of 160





Test Mode: TX B MODE CHANNEL 01 \_ Adapter: BYD

# Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	57. 1600	47.62	-14.04	33. 58	40.00	-6. 42	Peak	
2	108.5700	39. 39	-16. 37	23.02	43.50	-20.48	Peak	
3	188. 1100	33. 49	-12.69	20.80	43.50	-22.70	Peak	
4	288.9900	34. 20	-14.26	19. 94	46.00	-26.06	Peak	
5	433. 5200	33. 90	-10.41	23. 49	46.00	-22.51	Peak	
6	606. 1800	31. 26	-6. 30	24.96	46.00	-21. 04	Peak	

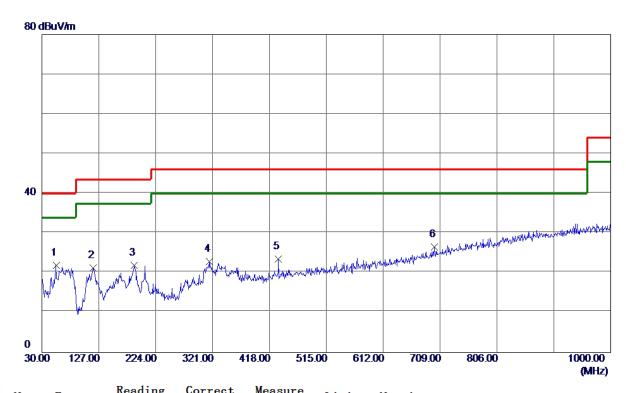
Report No.: BTL-FCCP-3-1712C036 Page 43 of 160





Test Mode: TX B MODE CHANNEL 01\_ Adapter: BYD

# Horizontal



No.	Freq.	Level	Factor	measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	54. 2500	35. 84	-13. 95	21.89	40.00	-18. 11	Peak	
2	117. 3000	36. 91	-15. 61	21. 30	43.50	-22. 20	Peak	
3	187. 1400	34. 52	-12.61	21. 91	43.50	-21.59	Peak	
4	315. 1800	35. 51	-12. 56	22. 95	46.00	-23.05	Peak	
5	433. 5200	33. 95	-10.41	23. 54	46.00	-22.46	Peak	
6	699. 3000	30. 46	-3. 96	26. 50	46.00	-19. 50	Peak	

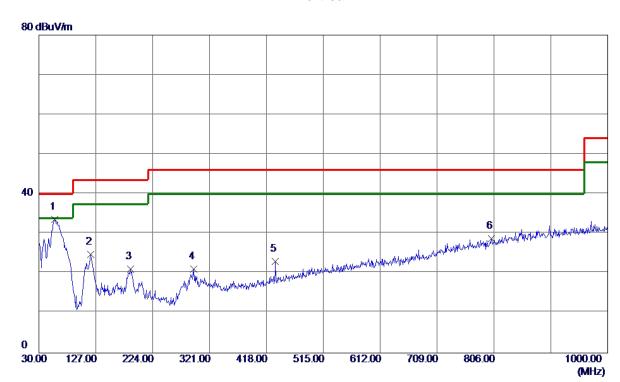
Report No.: BTL-FCCP-3-1712C036 Page 44 of 160





Test Mode: TX B MODE CHANNEL 11 \_ Adapter: BYD

## Vertical



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	57. 1600	47.70	-14.04	33. 66	40.00	<b>-6.34</b>	Peak	
2	118. 2700	40. 33	-15. 53	24.80	43.50	-18. 70	Peak	
3	186. 1700	33.66	<b>-12.54</b>	21. 12	43.50	-22. 38	Peak	
4	293.8400	34.85	-13. 67	21. 18	46.00	-24.82	Peak	
5	433. 5200	33. 52	-10.41	23. 11	46.00	-22.89	Peak	
6	802. 1200	30. 09	-1. 30	28. 79	46.00	-17. 21	Peak	

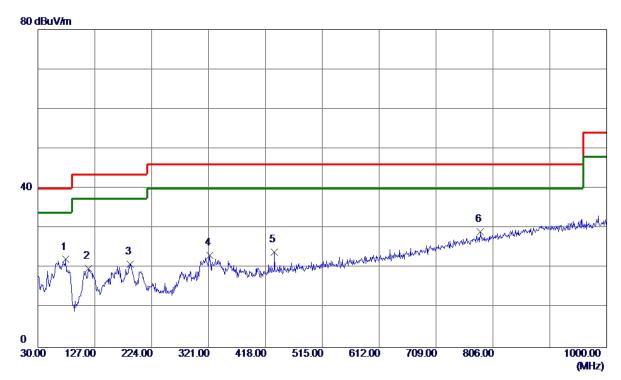
Report No.: BTL-FCCP-3-1712C036 Page 45 of 160





Test Mode: TX B MODE CHANNEL 11\_ Adapter: BYD

# Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	77. 5300	39.83	-17.67	22. 16	40.00	-17.84	Peak	
2	116. 3300	35. 50	-15. 69	19.81	43.50	-23.69	Peak	
3	187. 1400	33. 61	-12.61	21.00	43.50	-22.50	Peak	
4	322.9400	35. 67	-12.43	23. 24	46.00	-22.76	Peak	
5	433. 5200	34.42	-10.41	24.01	46.00	-21.99	Peak	
6 *	784. 6599	30. 78	-1.69	29. 09	46.00	-16. 91	Peak	

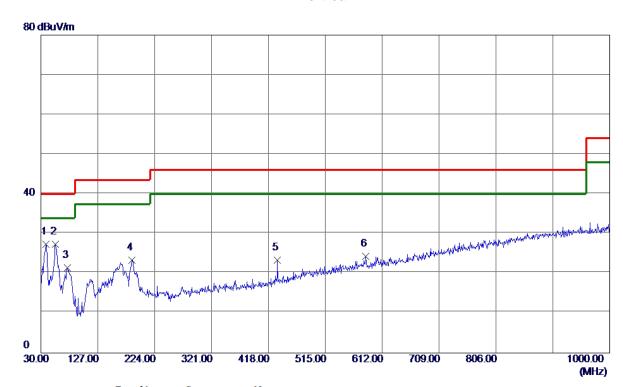
Report No.: BTL-FCCP-3-1712C036 Page 46 of 160





Test Mode: TX B MODE CHANNEL 01 \_ Adapter: Salcomp

# Vertical



No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	38.7300	41. 49	-14. 16	27. 33	40.00	-12.67	Peak	
2 *	55. 2200	41. 31	-13. 94	27. 37	40.00	-12.63	Peak	
3	75. 5899	38.65	-17.22	21.43	40.00	-18.57	Peak	
4	185. 2000	35. 78	-12.46	23. 32	43.50	-20. 18	Peak	
5	433. 5200	33. 75	-10.41	23. 34	46.00	-22.66	Peak	
6	583.8700	31. 16	-6.84	24. 32	46.00	-21.68	Peak	

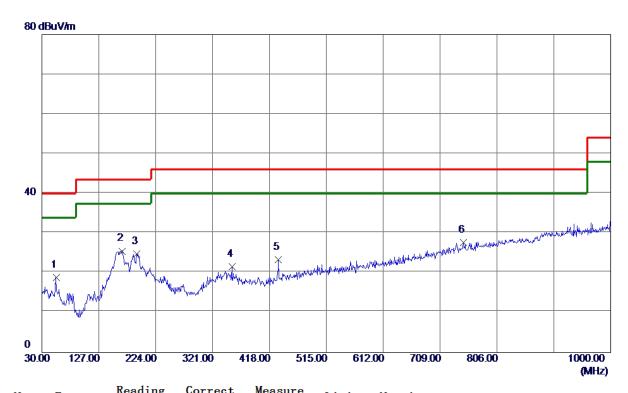
Report No.: BTL-FCCP-3-1712C036 Page 47 of 160





Test Mode: TX B MODE CHANNEL 01 \_ Adapter: Salcomp

# Horizontal



No.	Freq.	Keading Level	Correct Factor	measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	54. 2500	32. 81	<b>-13.95</b>	18.86	40.00	-21. 14	Peak	
2 *	166.7700	38. 05	-12. 53	25. 52	43.50	-17.98	Peak	
3	191. 9900	37. 90	-13.03	24.87	43.50	-18.63	Peak	
4	353. 9800	33. 55	-11. 91	21.64	46.00	-24. 36	Peak	
5	433. 5200	33. 75	-10.41	23. 34	46.00	-22.66	Peak	
6	748. 7700	30. 14	-2.48	27.66	46.00	-18. 34	Peak	

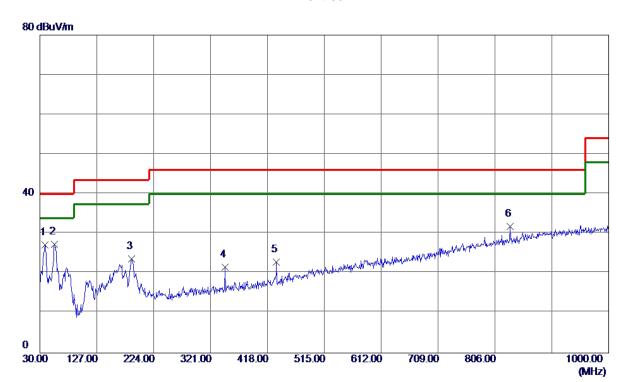
Report No.: BTL-FCCP-3-1712C036 Page 48 of 160





Test Mode: TX B MODE CHANNEL 11 \_ Adapter: Salcomp

# Vertical



N	о.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		38.7300	41.42	-14. 16	27. 26	40.00	-12.74	Peak	
2	*	55. 2200	41.31	-13.94	27. 37	40.00	-12.63	Peak	
3		186. 1700	36. 18	-12. 54	23.64	43.50	-19.86	Peak	
4		346. 2200	33. 61	<b>-12.02</b>	21. 59	46.00	-24.41	Peak	
5		433. 5200	33. 28	-10.41	22.87	46.00	-23. 13	Peak	
6		832. 1900	32. 31	-0.48	31.83	46.00	-14. 17	Peak	

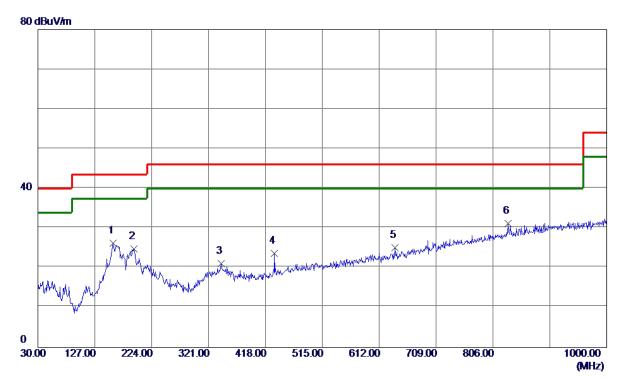
Report No.: BTL-FCCP-3-1712C036 Page 49 of 160





Test Mode: TX B MODE CHANNEL 11 \_ Adapter: Salcomp

# Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	158. 0399	39. 27	<b>-13. 05</b>	26. 22	43.50	-17. 28	Peak	
2	193. 9299	37. 95	-13. 20	24.75	43.50	-18.75	Peak	
3	342. 3400	33. 15	-12.09	21.06	46.00	-24.94	Peak	
4	433. 5200	34. 12	-10.41	23.71	46.00	-22. 29	Peak	
5	639. 1599	30.75	-5. 68	25. 07	46.00	-20.93	Peak	
6 *	832. 1900	31.66	-0.48	31. 18	46.00	-14.82	Peak	

Report No.: BTL-FCCP-3-1712C036 Page 50 of 160





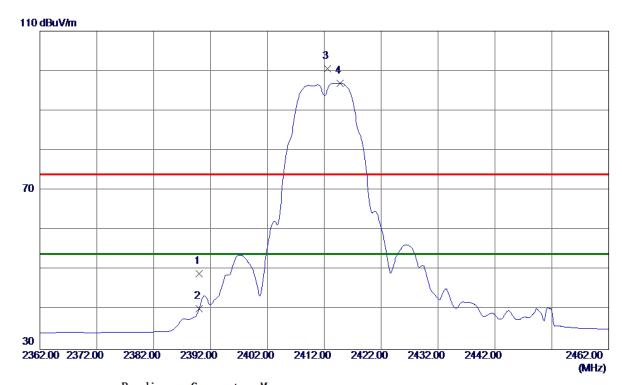
APPENDIX D - RADIATED EMISSION (ABOVE 1000MHZ)

Report No.: BTL-FCCP-3-1712C036 Page 51 of 160





## Vertical



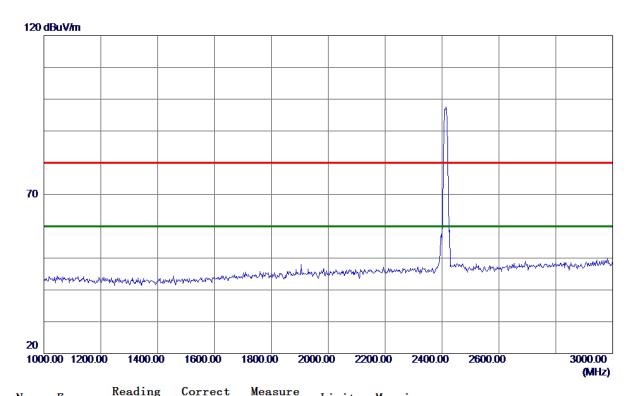
No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	15. 96	33.06	49.02	74.00	-24. 98	Peak	
2	2390.0000	7. 24	33.06	40.30	54.00	-13.70	AVG	
3	2412.6000	67.44	33. 14	100. 58	74.00	26. 58	Peak	No Limit
4 *	2414.8000	63.77	33. 15	96. 92	54.00	42.92	AVG	No Limit

Report No.: BTL-FCCP-3-1712C036 Page 52 of 160





### **Vertical**



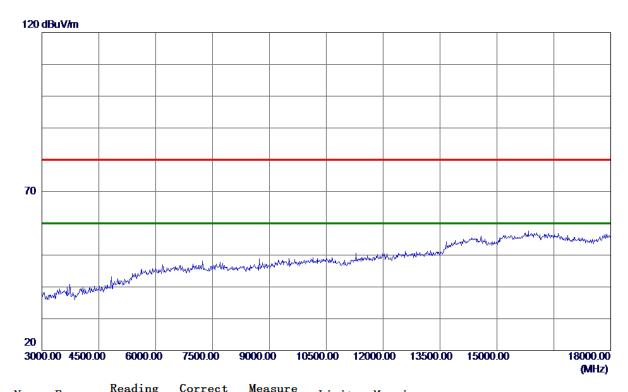
No.	Freq.	Level	Factor	ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment

Report No.: BTL-FCCP-3-1712C036 Page 53 of 160





### **Vertical**



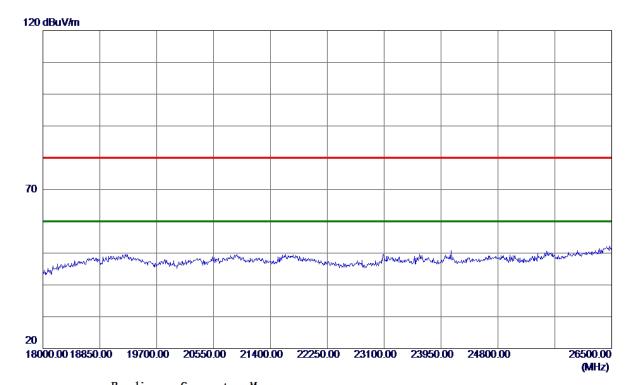
No.	Freq.	Keading Level	Factor	measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 54 of 160





#### **Vertical**



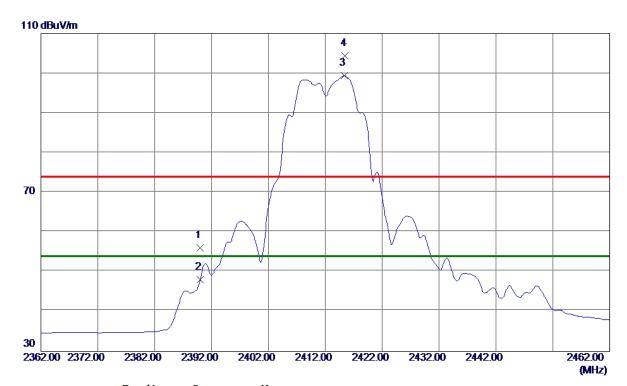
No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 55 of 160





## Horizontal



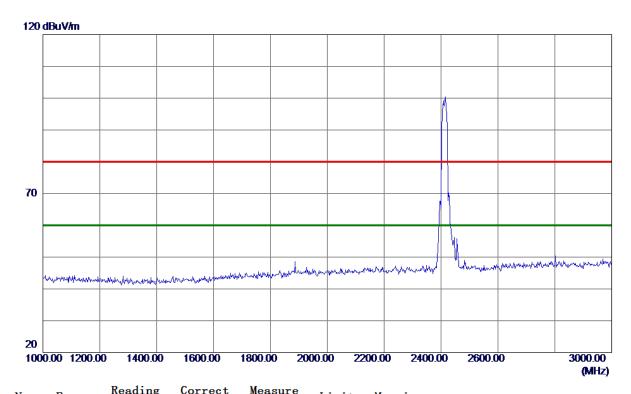
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	23. 02	33.06	<b>56.08</b>	74.00	-17.92	Peak	
2	2390.0000	14. 99	33. 06	48.05	54.00	-5.95	AVG	
3 *	2415. 3000	66. 23	33. 15	99. 38	54.00	45. 38	AVG	No Limit
4	2415. 5000	71. 28	33. 15	104. 43	74.00	30. 43	Peak	No Limit

Report No.: BTL-FCCP-3-1712C036 Page 56 of 160





#### Horizontal



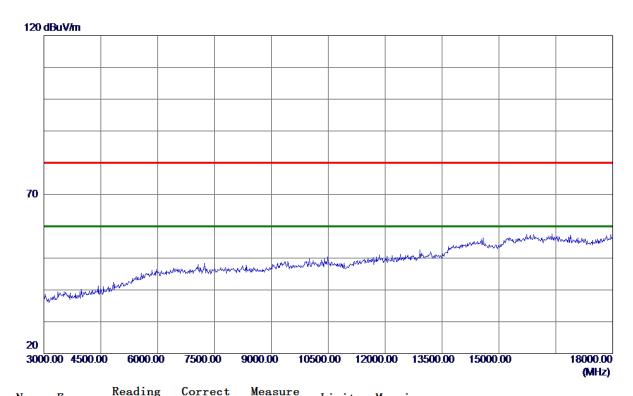
No.	Freq.	Level	Factor	ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 57 of 160





#### Horizontal



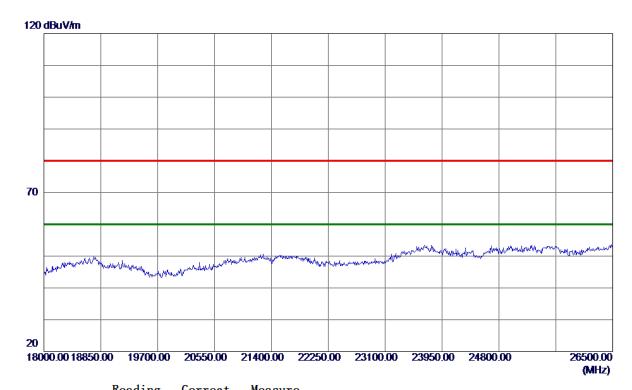
No.	Freq.	Level	Factor	ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 58 of 160





#### Horizontal



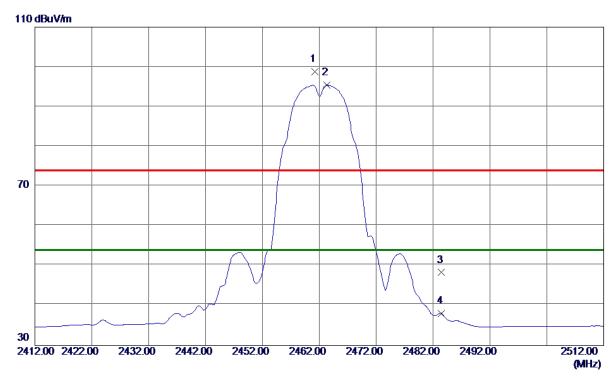
No.	Freq.	Level	Factor	ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036





## **Vertical**



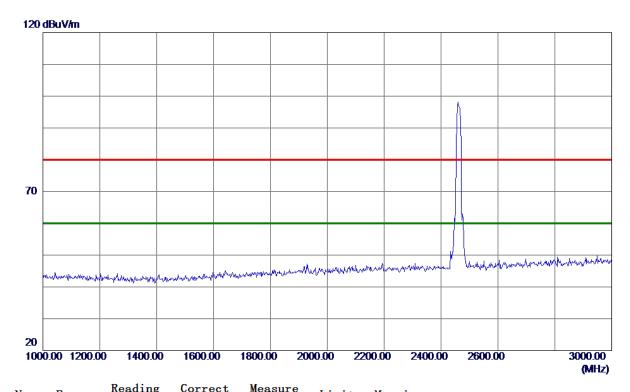
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2461. 2000	65. 55	33. 32	98. 87	74.00	24.87	Peak	No Limit
2 *	2463. 3000	62. 11	33. 33	95.44	54.00	41.44	AVG	No Limit
3	2483. 5000	14.91	33.41	48. 32	74.00	-25.68	Peak	
4	2483. 5000	4.63	33.41	38. 04	54.00	-15.96	AVG	

Report No.: BTL-FCCP-3-1712C036 Page 60 of 160





## Vertical



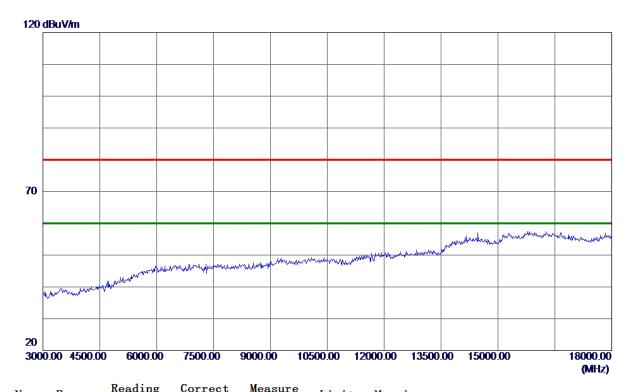
No.	Freq.	Level		measure	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 61 of 160





### **Vertical**



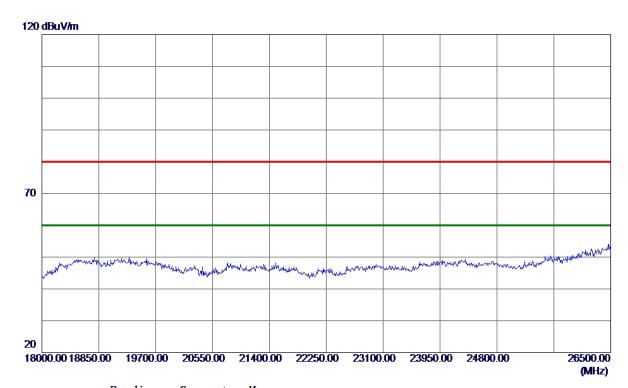
No.	Freq.	Keading Level	Factor	measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 62 of 160





#### **Vertical**



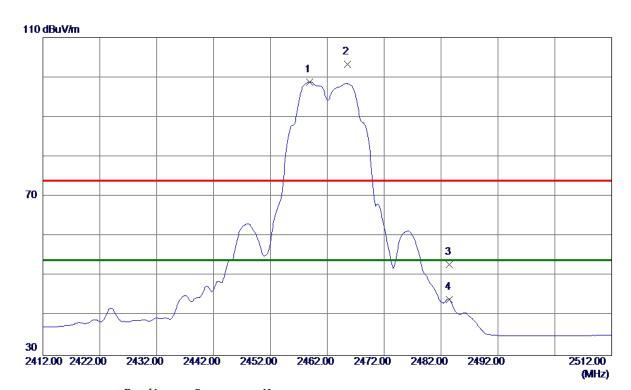
No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 63 of 160





## Horizontal



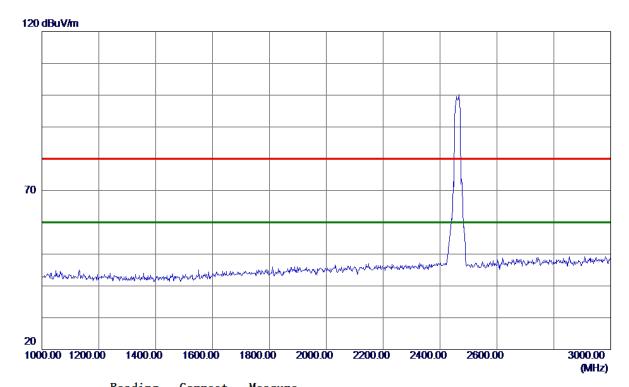
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2458.9000	65. 52	33. 32	98. 84	54.00	44.84	AVG	No Limit
2	2465.6000	69.89	33. 34	103. 23	74.00	29. 23	Peak	No Limit
3	2483. 5000	19. 41	33.41	52. 82	74.00	-21. 18	Peak	
4	2483. 5000	10.71	33. 41	44. 12	54.00	-9.88	AVG	

Report No.: BTL-FCCP-3-1712C036 Page 64 of 160





#### Horizontal



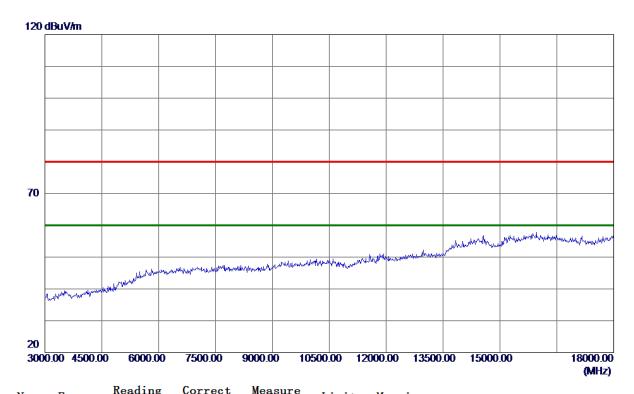
No.	Freq.	Level	Factor	measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 65 of 160





#### Horizontal



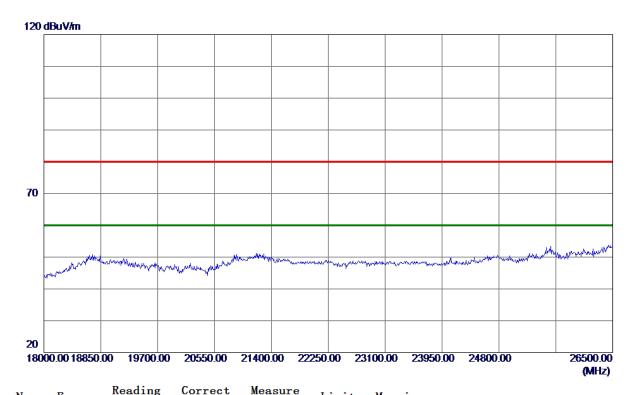
No.	Freq.	Level	Factor	ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment

Report No.: BTL-FCCP-3-1712C036 Page 66 of 160





#### Horizontal



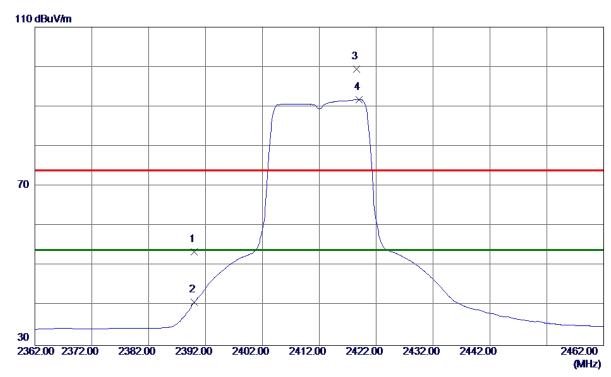
No.	Freq.	Level	Factor	ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 67 of 160





## Vertical



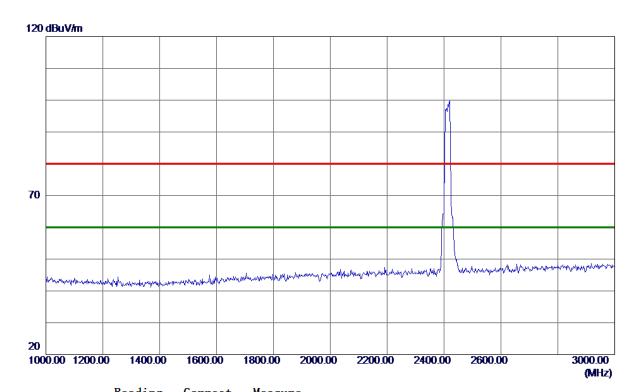
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	20.41	33.06	53. 47	74.00	-20. 53	Peak	
2	2390.0000	7.82	33. 06	40.88	54.00	-13. 12	AVG	
3	2418.6000	66. 23	33. 16	99. 39	74.00	25. 39	Peak	No Limit
4 *	2419.0000	58. 60	33. 17	91.77	54.00	37.77	AVG	No Limit

Report No.: BTL-FCCP-3-1712C036 Page 68 of 160





### **Vertical**



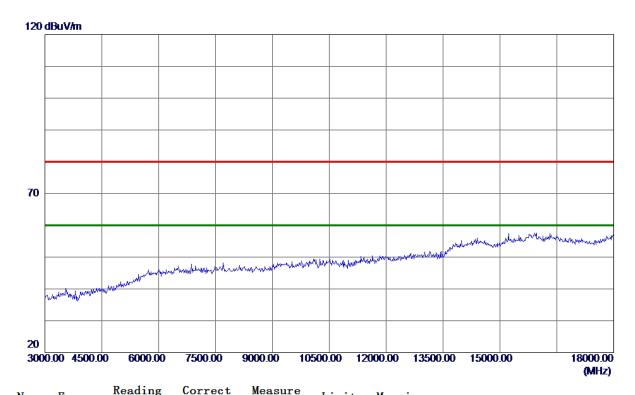
No.	Freq.	Keading Level	Factor	measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 69 of 160





### **Vertical**



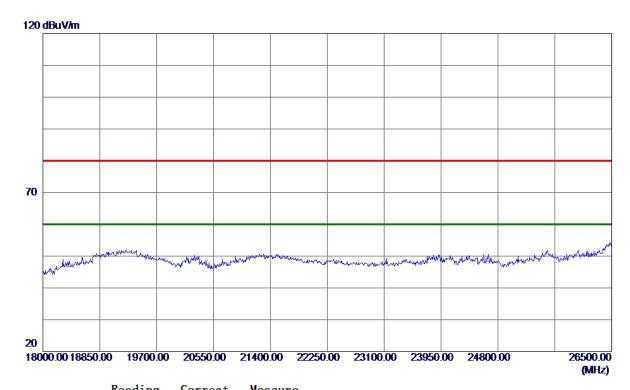
No	. Freq.		Factor		Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 70 of 160





### **Vertical**



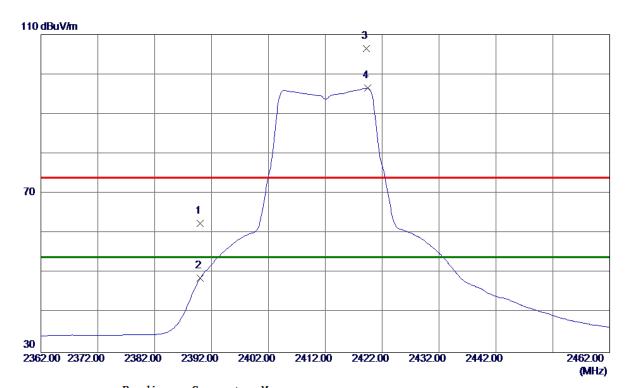
No.	Freq.	Level	Factor	ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 71 of 160





#### Horizontal



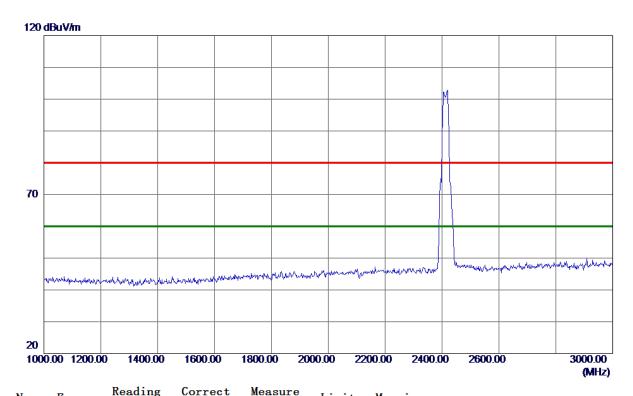
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	29.46	33.06	62. 52	74.00	-11.48	Peak	
2	2390.0000	15.65	33.06	48.71	54.00	-5. 29	AVG	
3	2419. 2000	73. 31	33. 17	106. 48	74.00	32.48	Peak	No Limit
4 *	2419. 4000	63. 32	33. 17	96. 49	54.00	42.49	AVG	No Limit

Report No.: BTL-FCCP-3-1712C036 Page 72 of 160





### Horizontal



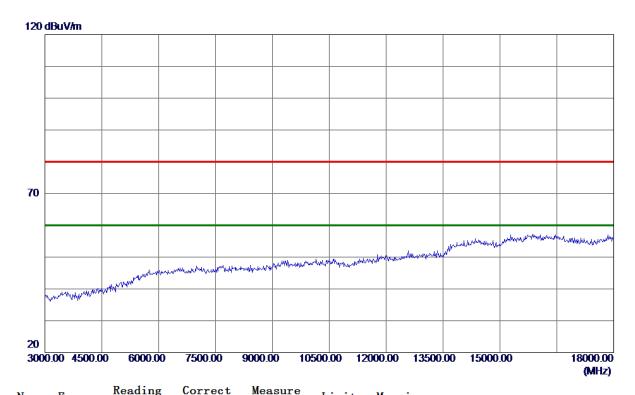
No.	Freq.	Level	Factor	ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 73 of 160





### Horizontal



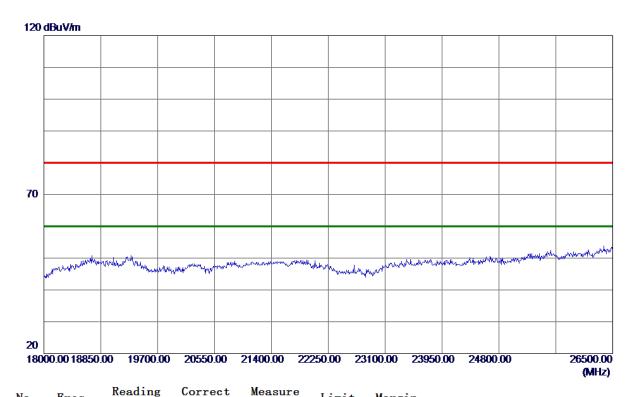
No.	Freq.	Level	Factor	ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment

Report No.: BTL-FCCP-3-1712C036 Page 74 of 160





### Horizontal



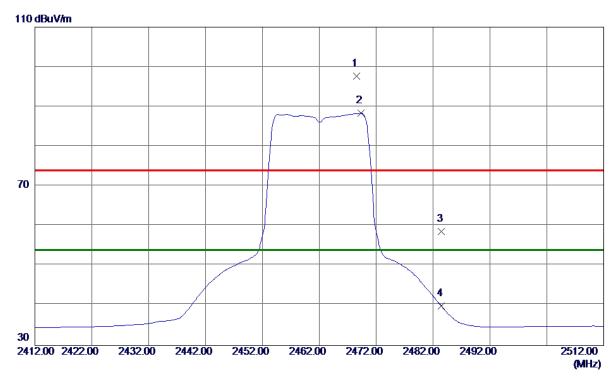
No.	Freq.	Level	Factor	ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 75 of 160





## Vertical



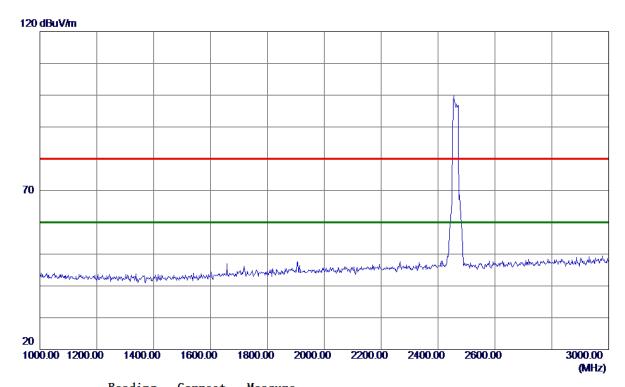
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2468.6000	64. 34	33. 35	97. 69	74.00	23.69	Peak	No Limit
2 *	2469. 3000	55. 00	33. 35	88. 35	54.00	34. 35	AVG	No Limit
3	2483. 5000	25. 22	33.41	58. 63	74.00	-15. 37	Peak	
4	2483. 5000	6.48	33. 41	39. 89	54.00	-14. 11	AVG	

Report No.: BTL-FCCP-3-1712C036 Page 76 of 160





### **Vertical**



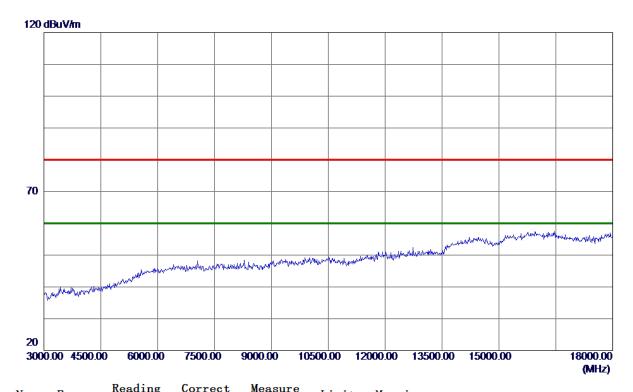
No.	Freq.	Reading Level	Factor	measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment

Report No.: BTL-FCCP-3-1712C036 Page 77 of 160





## **Vertical**



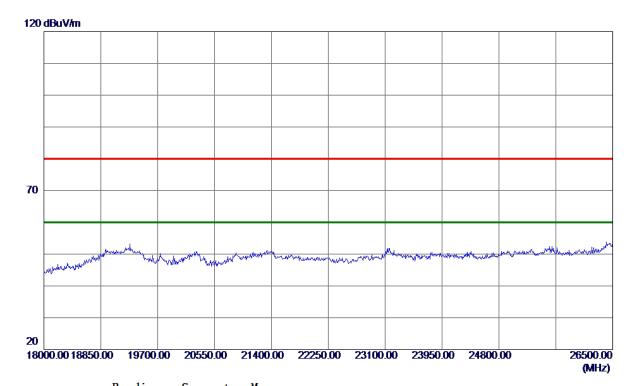
No.	Freq.	Level	Factor	measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036





## **Vertical**



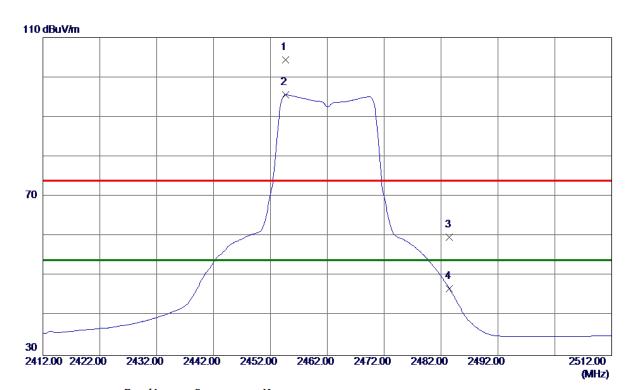
No.	Freq.	keading Level	Correct Factor	measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 79 of 160





### Horizontal



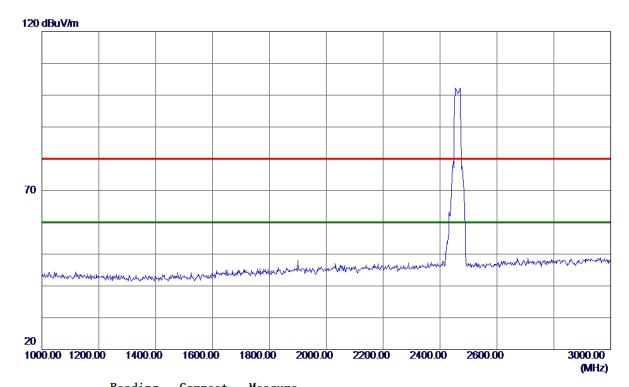
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2454.7000	71. 13	33. 30	104.43	74.00	30.43	Peak	No Limit
2 *	2454.7000	62. 29	33. 30	95. 59	54.00	41.59	AVG	No Limit
3	2483. 5000	26. 38	33.41	59. 79	74.00	-14.21	Peak	
4	2483. 5000	13. 39	33. 41	46. 80	54.00	-7. 20	AVG	

Report No.: BTL-FCCP-3-1712C036 Page 80 of 160





### Horizontal



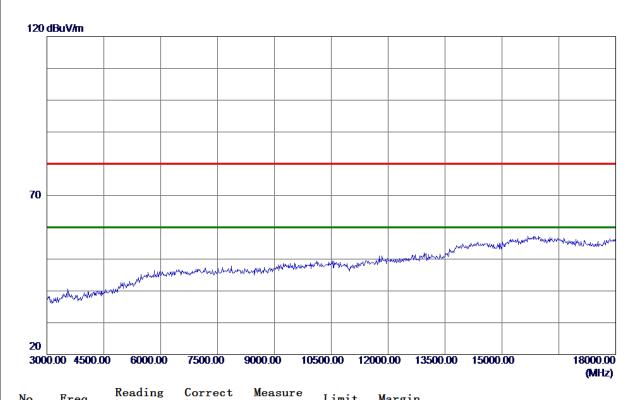
No.	Freq.	Level	Factor	measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 81 of 160





### Horizontal



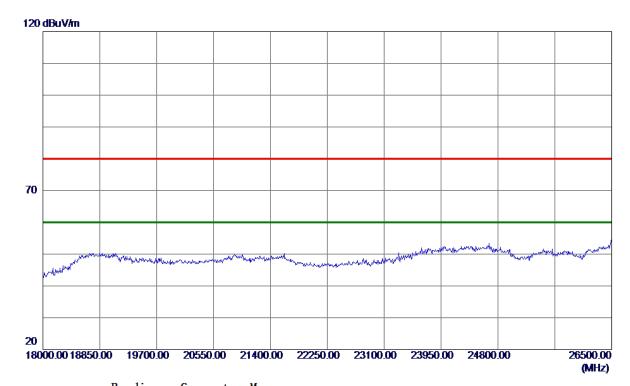
No	. Freq.	Level	Factor	ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036





### Horizontal



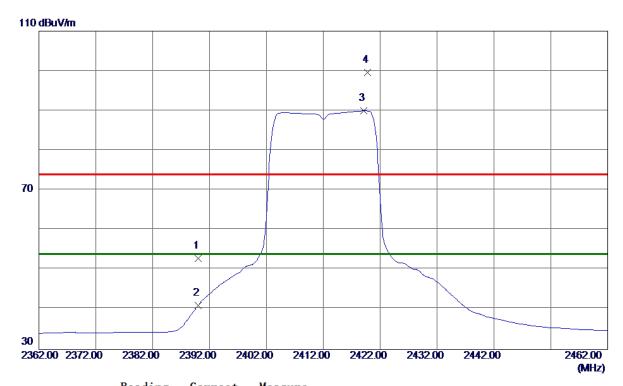
No.	Freq.	keading Level	Correct Factor	measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 83 of 160





## **Vertical**



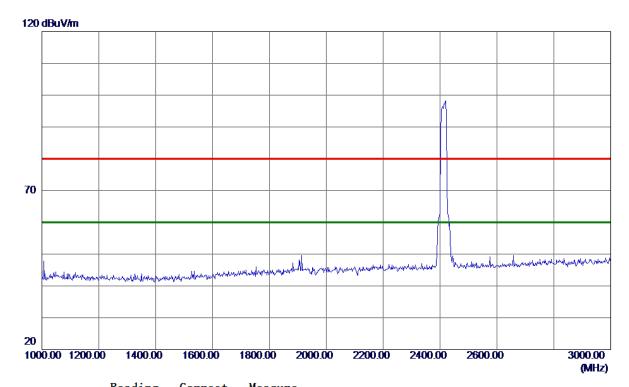
No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	19. 76	33.06	52.82	74.00	-21. 18	Peak	
2	2390.0000	8. 04	33.06	41.10	54.00	-12.90	AVG	
3 *	2419. 1000	56. 76	33. 17	89. 93	54.00	35. 93	AVG	No Limit
4	2419.8000	66. 47	33. 17	99.64	74.00	25.64	Peak	No Limit

Report No.: BTL-FCCP-3-1712C036 Page 84 of 160





## Vertical



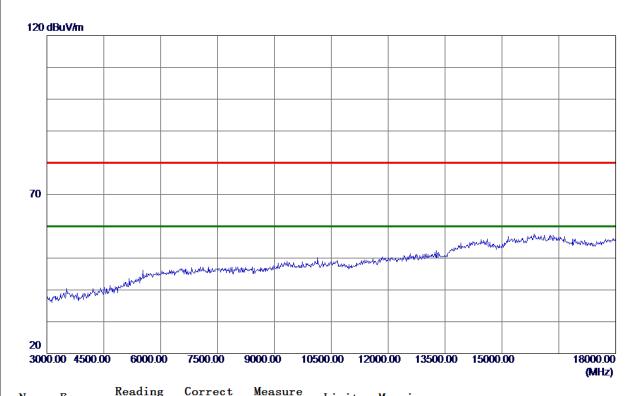
No.	Freq.	Level	Factor	measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 85 of 160





## **Vertical**



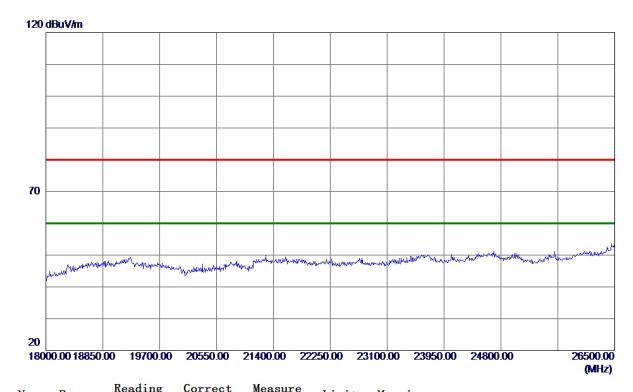
No.	Freq.	Level	Factor	ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment

Report No.: BTL-FCCP-3-1712C036 Page 86 of 160





## Vertical



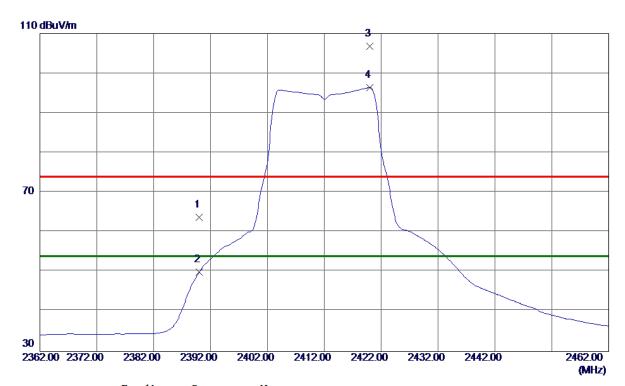
No.	Freq.	Level	Factor	measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036





### Horizontal



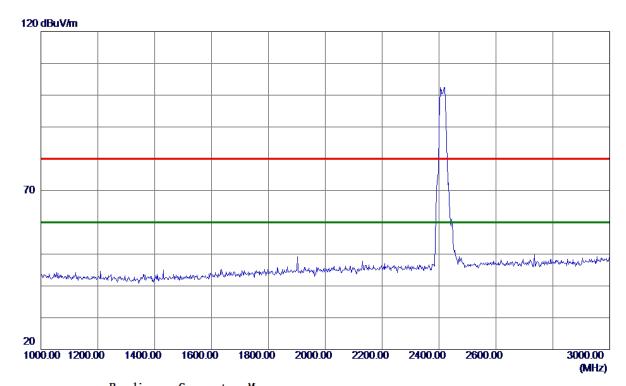
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	30.66	33. 06	63. 72	74.00	-10. 28	Peak	
2	2390.0000	16. 91	33. 06	49. 97	54.00	-4.03	AVG	
3	2420.0000	73. 61	33. 17	106. 78	74.00	32.78	Peak	No Limit
4 *	2420. 0000	63. 25	33. 17	96. 42	54.00	42.42	AVG	No Limit

Report No.: BTL-FCCP-3-1712C036 Page 88 of 160





### Horizontal



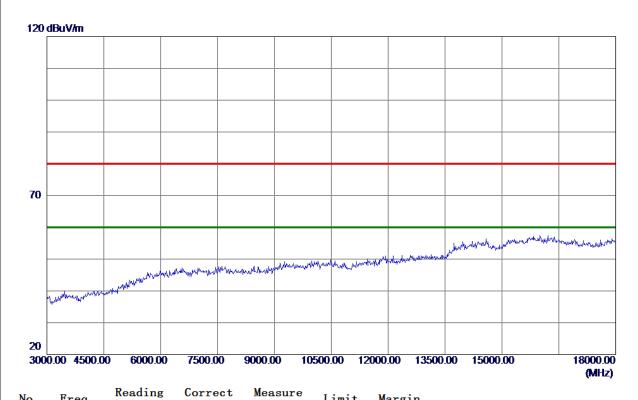
No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment

Report No.: BTL-FCCP-3-1712C036 Page 89 of 160





### Horizontal



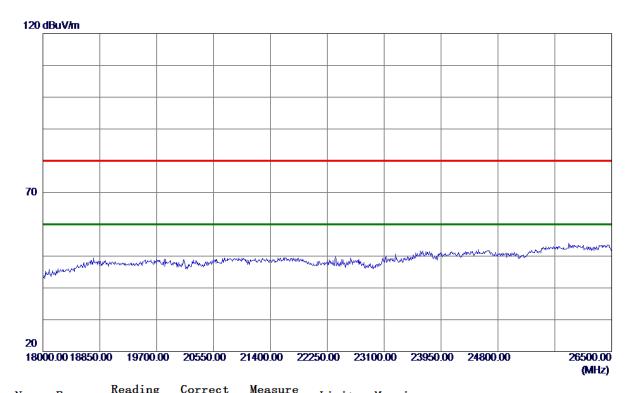
No.	Freq.	Level	Factor	ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 90 of 160





## Horizontal



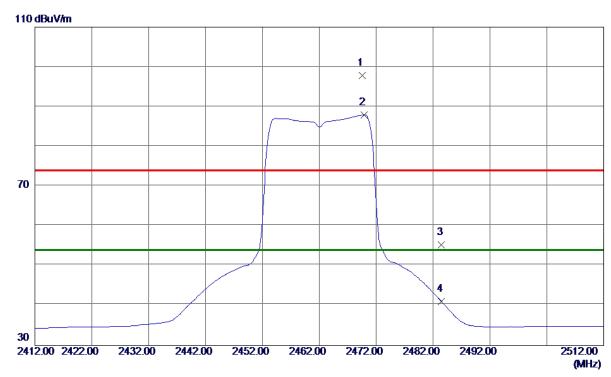
No.	Freq.	Level	Factor	ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment

Report No.: BTL-FCCP-3-1712C036 Page 91 of 160





## Vertical



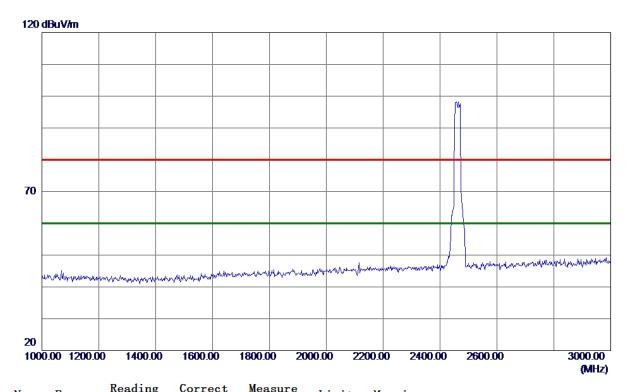
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2469.6000	64.45	33. 36	97.81	74.00	23.81	Peak	No Limit
2 *	2469.9000	54.60	33. 36	87.96	54.00	33.96	AVG	No Limit
3	2483. 5000	21.87	33.41	55. 28	74.00	-18.72	Peak	
4	2483. 5000	7.62	33. 41	41.03	54.00	-12. 97	AVG	

Report No.: BTL-FCCP-3-1712C036 Page 92 of 160





## Vertical



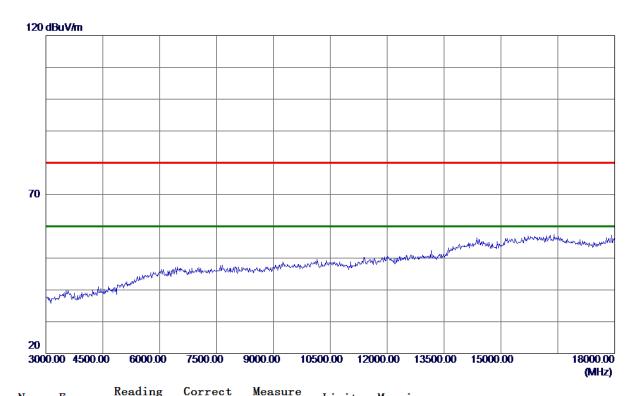
No.	Freq.	Level	Factor	measure	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment

Report No.: BTL-FCCP-3-1712C036 Page 93 of 160





## **Vertical**



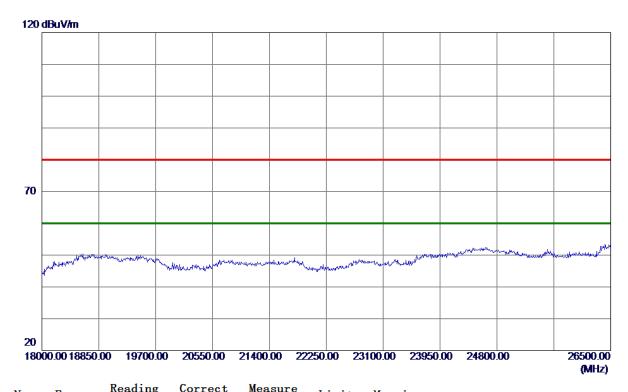
No.	Freq.	Level	Factor	ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page





## Vertical



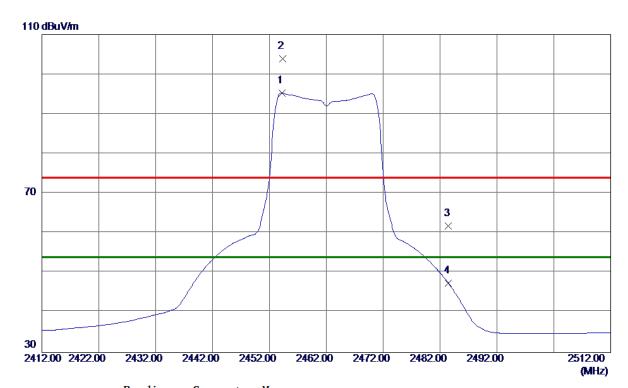
No.	Freq.	Keading Level	Factor	measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment

Report No.: BTL-FCCP-3-1712C036 Page 95 of 160





### Horizontal



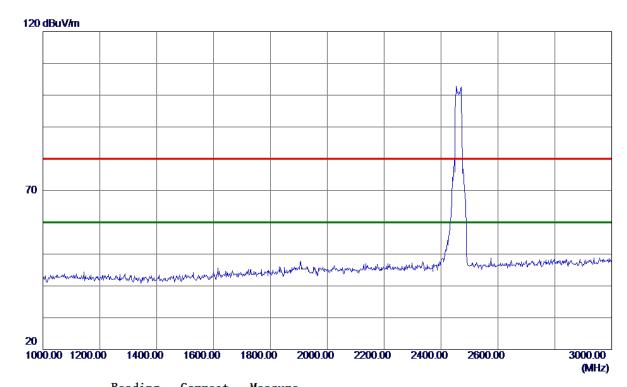
omment
o Limit
o Limit
C

Report No.: BTL-FCCP-3-1712C036 Page 96 of 160





## Horizontal



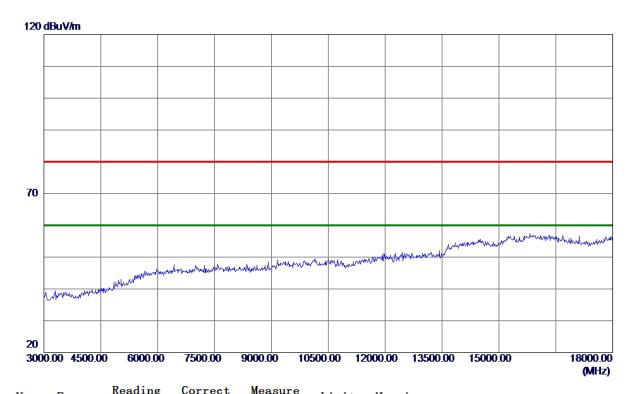
No.	Freq.	Level	Factor	measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 97 of 160





## Horizontal



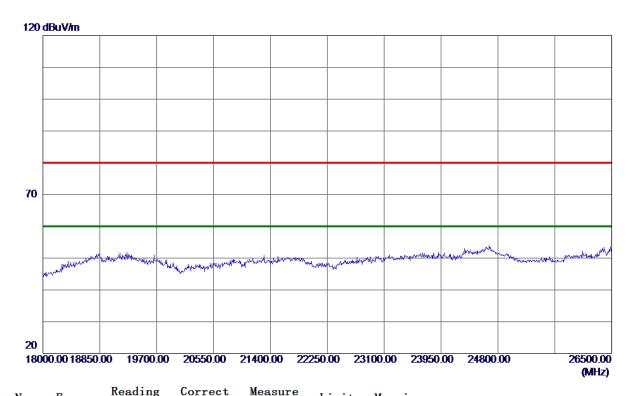
No.	Freq.	Level	Factor	ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment

Report No.: BTL-FCCP-3-1712C036 Page 98 of 160





## Horizontal



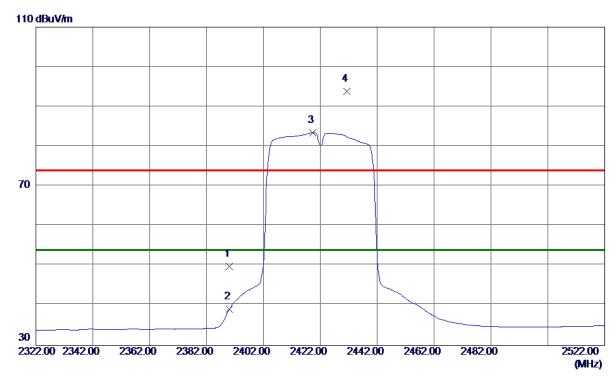
No.	Freq.	Level	Factor	ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 99 of 160





## Vertical



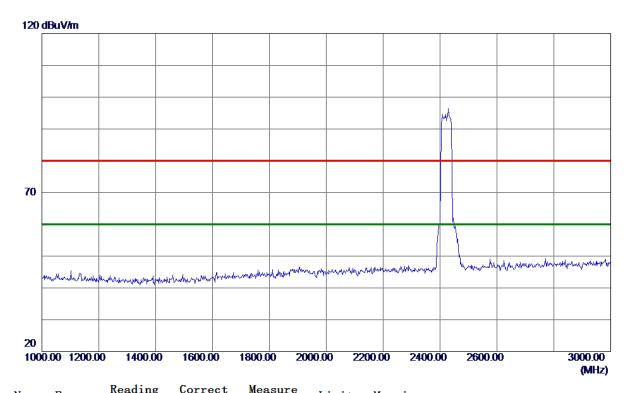
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	16.85	33.06	49. 91	74.00	-24. 09	Peak	
2	2390.0000	6.05	33.06	39. 11	54.00	-14.89	AVG	
3 *	2419.4000	50. 27	33. 17	83.44	54.00	29.44	AVG	No Limit
4	2431.4000	60. 58	33. 21	93. 79	74.00	19. 79	Peak	No Limit

Report No.: BTL-FCCP-3-1712C036 Page 100 of 160





## Vertical



No.	Freq.	Level	Factor	measure	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

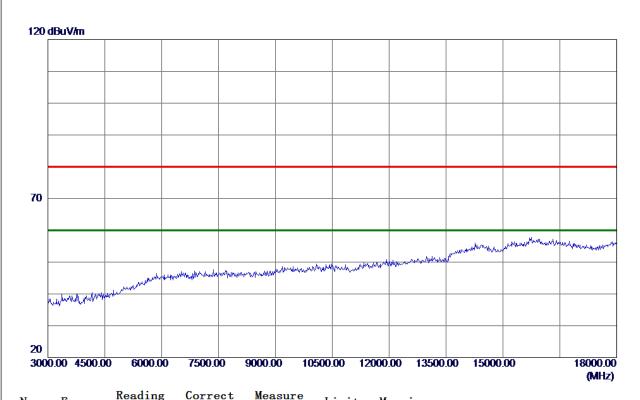
Report No.: BTL-FCCP-3-1712C036 Page 101 of 160





Orthogonal Axis:	x
Test Mode :	TX N-40M MODE 2422MHz

# **Vertical**



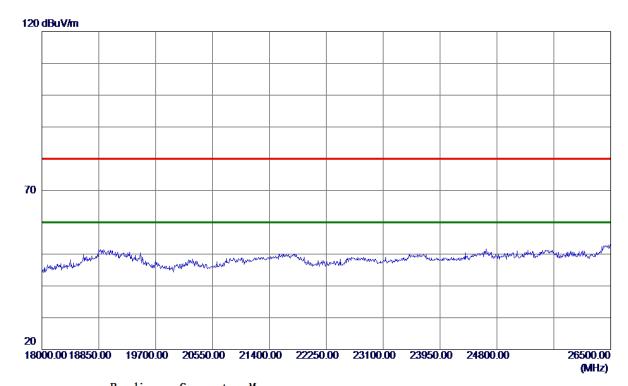
No.	Freq.	Level	Factor	ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 102 of 160





## Vertical



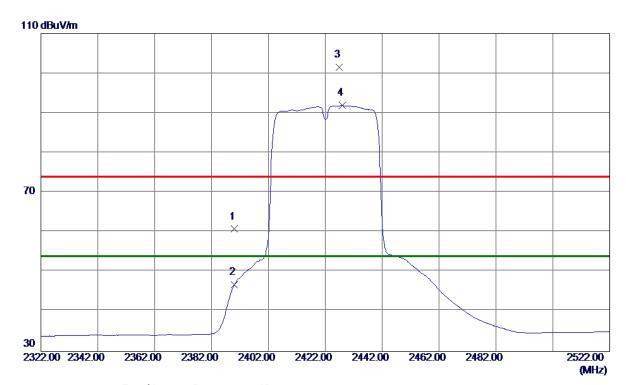
No.	Freq.	keading Level	Correct Factor	measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 103 of 160





### Horizontal



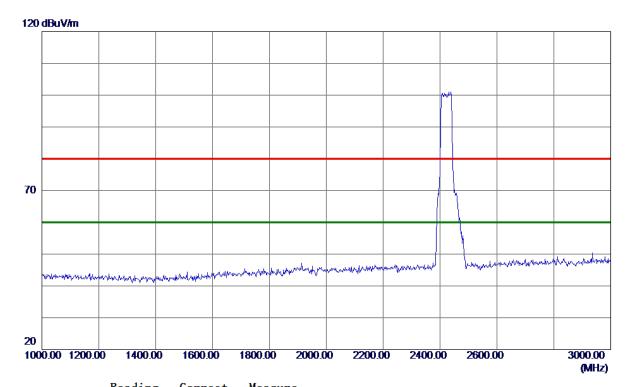
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	27.74	33.06	60.80	74.00	-13. 20	Peak	
2	2390.0000	13.75	33. 06	46.81	54.00	-7. 19	AVG	
3	2426.8000	68. 39	33. 19	101. 58	74.00	27. 58	Peak	No Limit
4 *	2428. 0000	58. 66	33. 20	91.86	54.00	37.86	AVG	No Limit
1 .	2120.0000	00.00	00. 20	01.00	01.00	01.00	nvo	NO LIMIT

Report No.: BTL-FCCP-3-1712C036 Page 104 of 160





### Horizontal



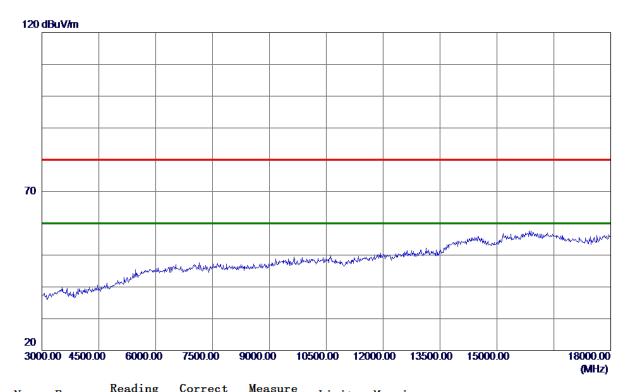
No.	Freq.	Level	Factor	measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 105 of 160





### Horizontal



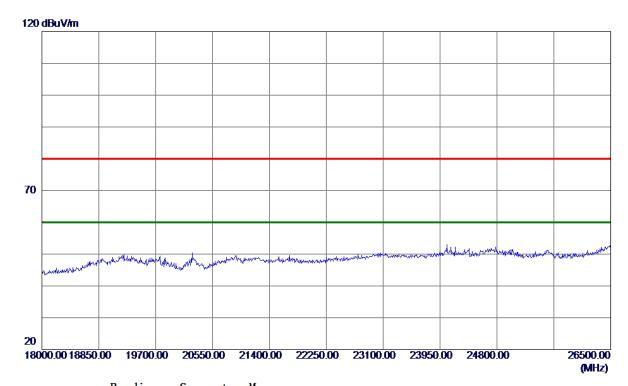
No.	Freq.	Level	Factor	measure	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment

Report No.: BTL-FCCP-3-1712C036 Page 106 of 160





### Horizontal



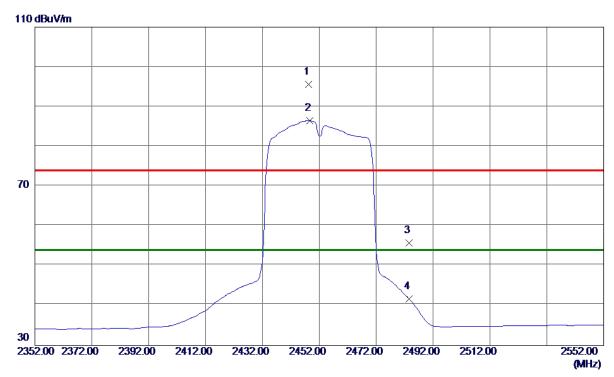
No.	Freq.		Correct Factor	measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 107 of 160





## Vertical



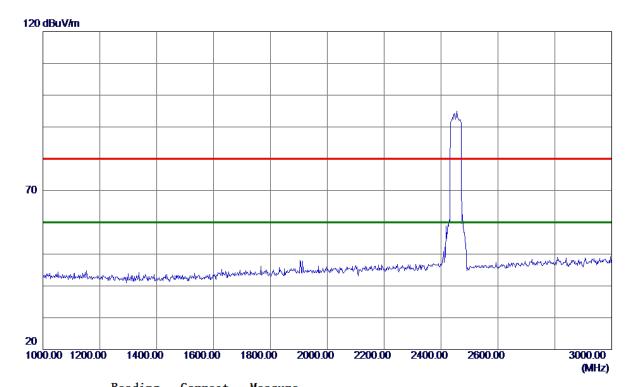
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2448. 2000	62. 31	33. 28	95. 59	74.00	21.59	Peak	No Limit
2 *	2448.6000	53. 16	33. 28	86.44	54.00	32.44	AVG	No Limit
3	2483. 5000	22.40	33.41	55. 81	74.00	-18. 19	Peak	
4	2483. 5000	8. 30	33.41	41.71	54.00	-12. 29	AVG	

Report No.: BTL-FCCP-3-1712C036 Page 108 of 160





## Vertical



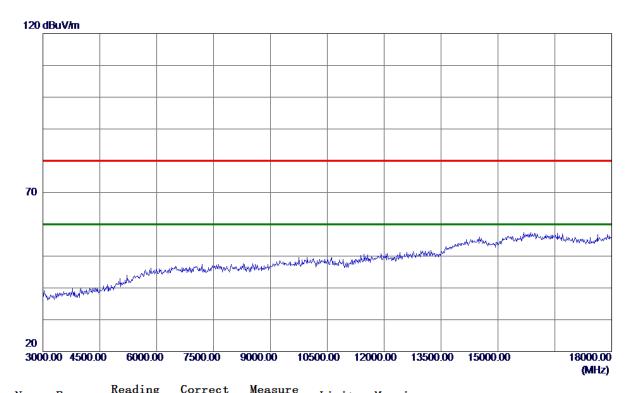
No.	Freq.	Level	Factor	measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 109 of 160





## Vertical



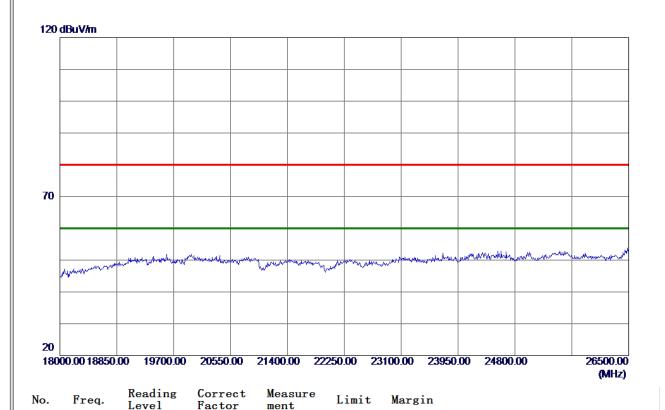
No.	Freq.	Level	Factor	ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment

Report No.: BTL-FCCP-3-1712C036 Page 110 of 160





## **Vertical**



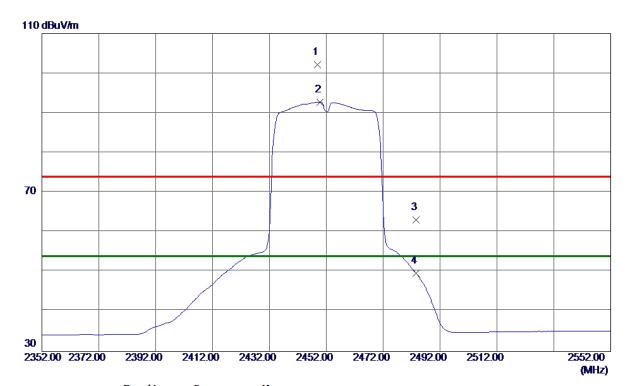
No.	Freq.	Level	Factor	ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment

Report No.: BTL-FCCP-3-1712C036 Page 111 of 160





### Horizontal



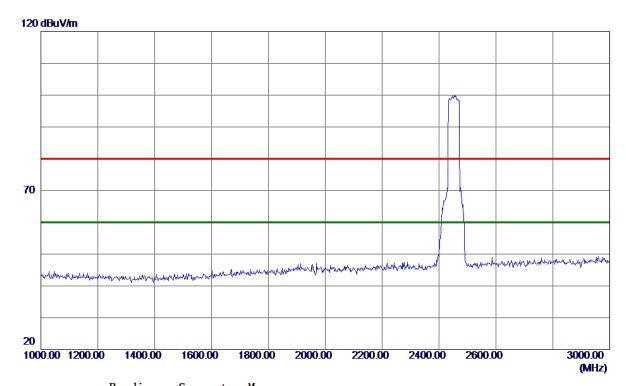
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2448.8000	68. 95	33. 28	102. 23	74.00	28. 23	Peak	No Limit
2 *	2449.8000	59. 51	33. 28	92.79	54.00	38. 79	AVG	No Limit
3	2483. 5000	29.69	33.41	63. 10	74.00	-10.90	Peak	
4	2483. 5000	16. 25	33.41	49.66	54.00	-4.34	AVG	

Report No.: BTL-FCCP-3-1712C036 Page 112 of 160





### Horizontal



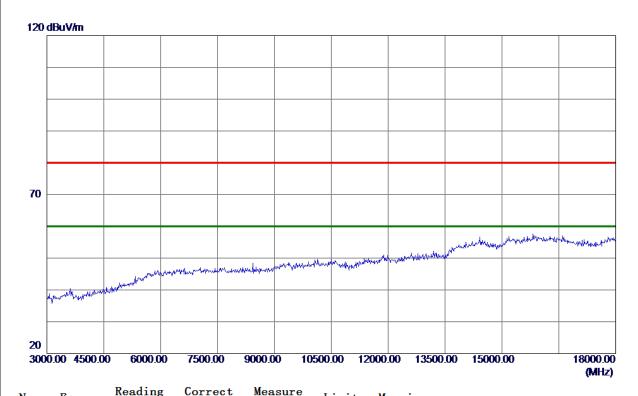
No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment

Report No.: BTL-FCCP-3-1712C036 Page 113 of 160





### Horizontal



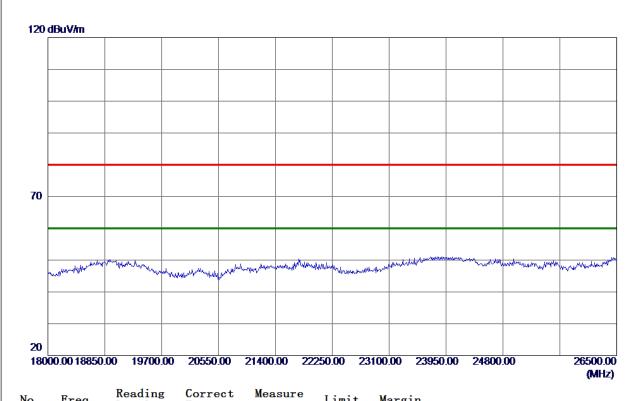
No.	Freq.	Level	Factor	ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 114 of 160





### Horizontal



No.	freq.	Level	Factor	ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	

Report No.: BTL-FCCP-3-1712C036 Page 115 of 160





APPENDIX E - BANDWIDTH						

Report No.: BTL-FCCP-3-1712C036 Page 116 of 160

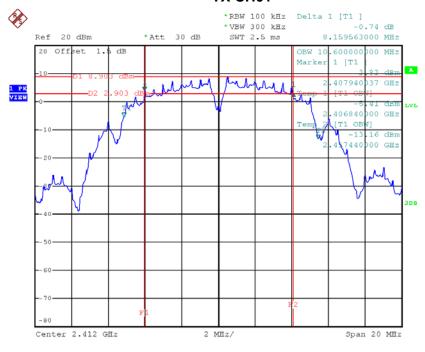




# Test Mode: TX B Mode\_CH01/06/11

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	8.16	10.6	500	Complies
2437	8.04	10.56	500	Complies
2462	8.11	10.8	500	Complies

## TX CH01

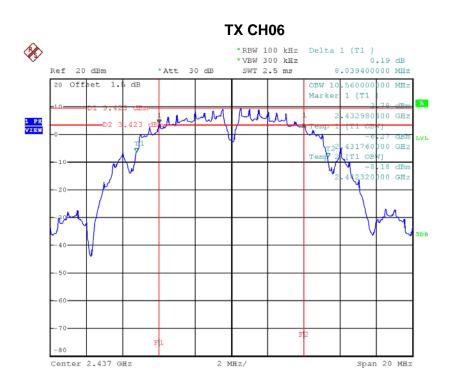


Date: 27.DEC.2017 19:19:46

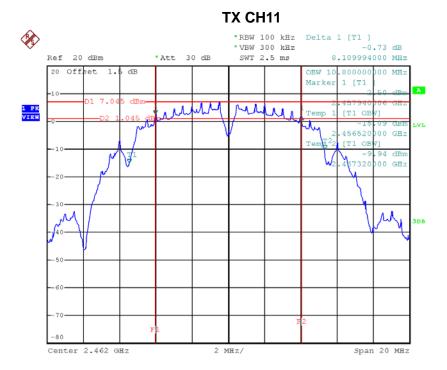
Report No.: BTL-FCCP-3-1712C036 Page 117 of 160







Date: 27.DEC.2017 19:21:32



Date: 27.DEC.2017 19:23:11

Report No.: BTL-FCCP-3-1712C036 Page 118 of 160

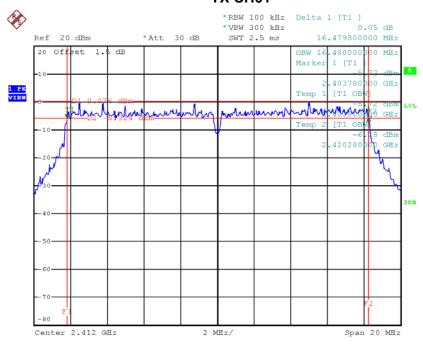




# Test Mode: TX G Mode\_CH01/06/11

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	16.48	16.48	500	Complies
2437	16.44	16.44	500	Complies
2462	16.5	16.44	500	Complies

## TX CH01

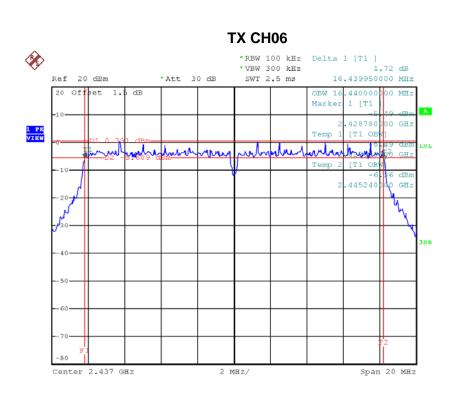


Date: 15.JAN.2018 08:52:37

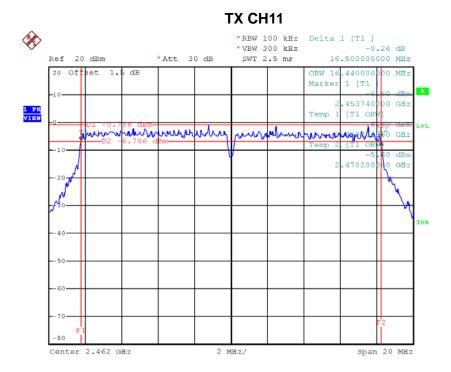
Report No.: BTL-FCCP-3-1712C036 Page 119 of 160







Date: 15.JAN.2018 08:53:44



Date: 15.JAN.2018 08:54:53

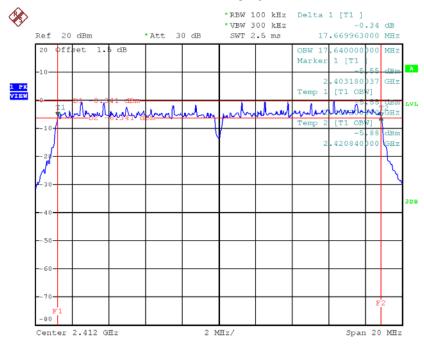




# Test Mode: TX N-20MHz Mode\_CH01/06/11

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	17.67	17.64	500	Complies
2437	17.63	17.6	500	Complies
2462	17.62	17.6	500	Complies

### TX CH01

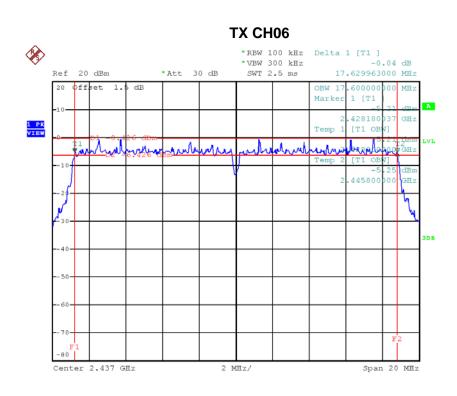


Date: 15.JAN.2018 08:57:46

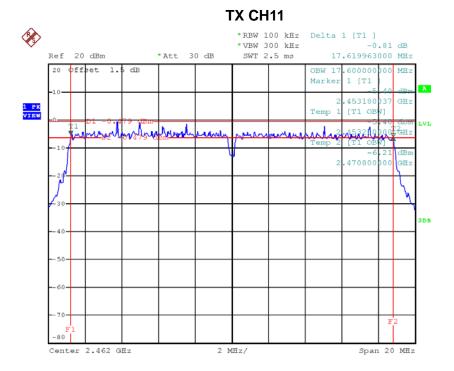
Report No.: BTL-FCCP-3-1712C036 Page 121 of 160







Date: 15.JAN.2018 08:59:11



Date: 15.JAN.2018 09:00:21

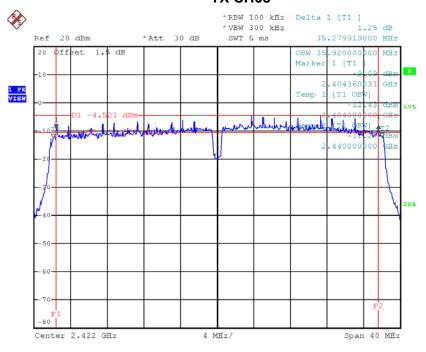




# Test Mode: TX N-40MHz Mode\_CH03/06/09

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2422	35.28	35.92	500	Complies
2437	35.51	35.84	500	Complies
2452	35.2	35.84	500	Complies

## **TX CH03**

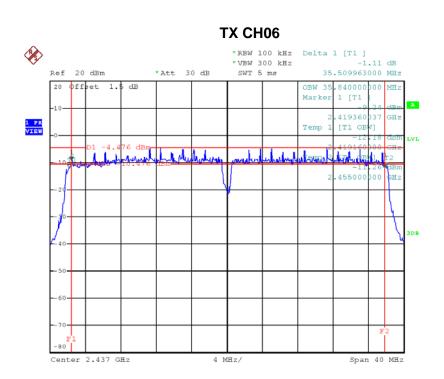


Date: 15.JAN.2018 09:03:38

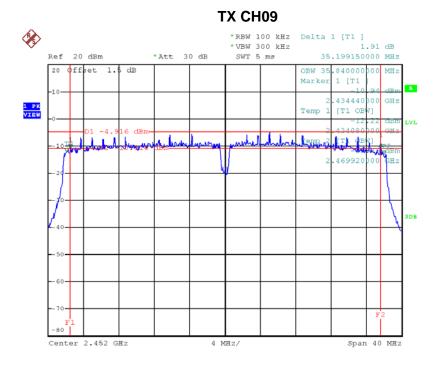
Report No.: BTL-FCCP-3-1712C036 Page 123 of 160







Date: 15.JAN.2018 09:04:45



Date: 15.JAN.2018 09:10:40





APPENDIX F - MAXIMUM PEAK CONDUCTED OUTPUT POWER

Report No.: BTL-FCCP-3-1712C036 Page 125 of 160





Test Mode :TX B Mode_CH01/06/11					
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	
2412	20.47	0.11	30.00	1.00	Complies
2437	20.68	0.12	30.00	1.00	Complies
2462	20.67	0.12	30.00	1.00	Complies

Test Mode :TX G Mode_CH01/06/11					
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	
2412	21.90	0.15	30.00	1.00	Complies
2437	22.21	0.17	30.00	1.00	Complies
2462	21.78	0.15	30.00	1.00	Complies

Test Mode :TX N20 Mode_CH01/06/11					
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	
2412	21.54	0.14	30.00	1.00	Complies
2437	21.79	0.15	30.00	1.00	Complies
2462	21.47	0.14	30.00	1.00	Complies

Test Mode :TX N40 Mode_CH03/06/09					
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	
2422	20.46	0.11	30.00	1.00	Complies
2437	19.86	0.10	30.00	1.00	Complies
2452	20.15	0.10	30.00	1.00	Complies

Report No.: BTL-FCCP-3-1712C036 Page 126 of 160





APPENDIX G - ANTENNA CONDUCTED SPURIOUS EMISSION

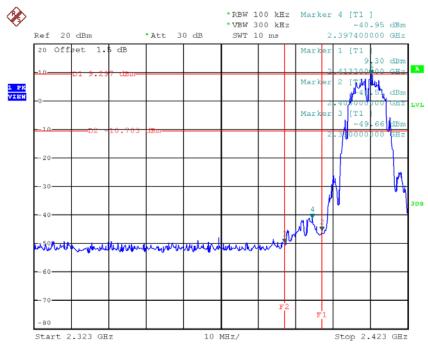
Report No.: BTL-FCCP-3-1712C036 Page 127 of 160





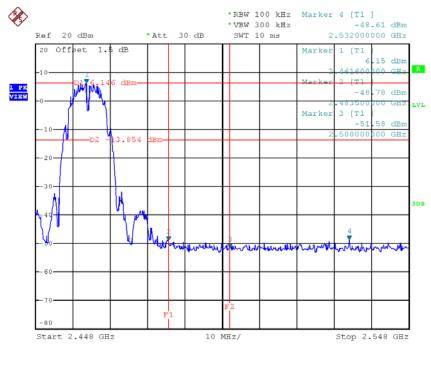


#### TX B mode CH01



Date: 27.DEC.2017 19:19:54

## TX B mode CH11

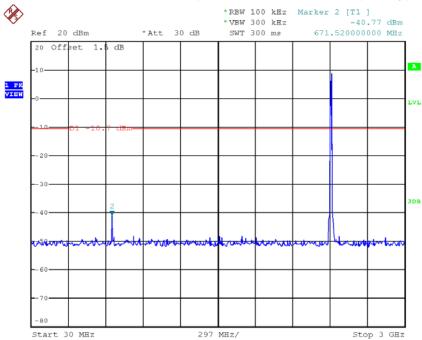


Date: 27.DEC.2017 19:23:19

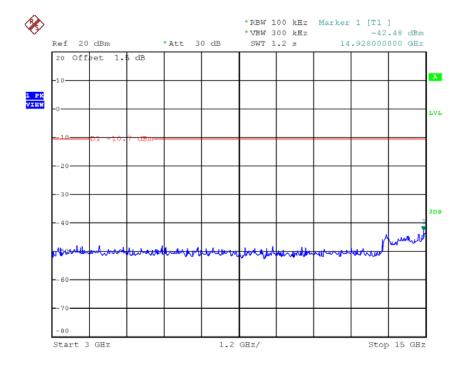








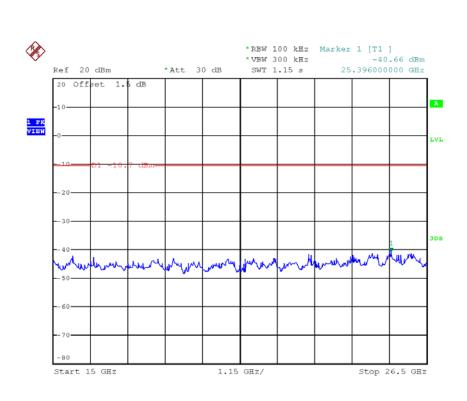
Date: 27.DEC.2017 19:20:07



Date: 27.DEC.2017 19:20:15

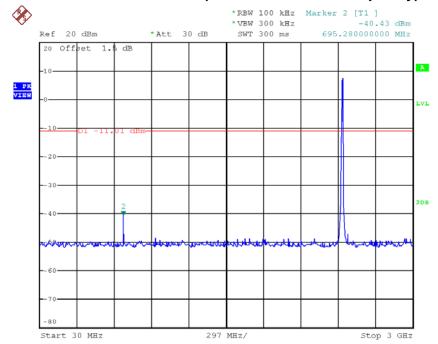






Date: 27.DEC.2017 19:20:23

# TX B mode CH06 (10 Harmonic of the frequency)

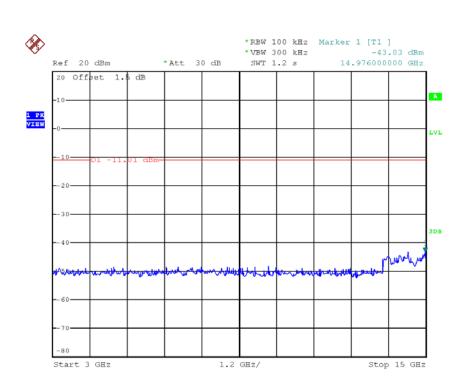


Date: 27.DEC.2017 19:21:53

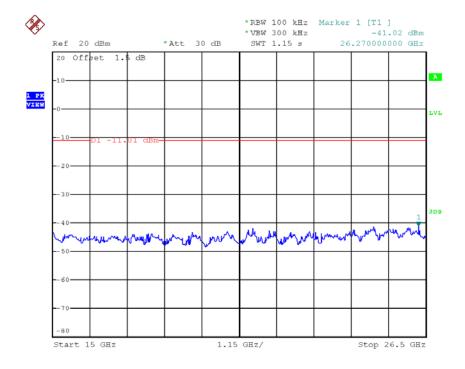
Report No.: BTL-FCCP-3-1712C036







Date: 27.DEC.2017 19:22:01

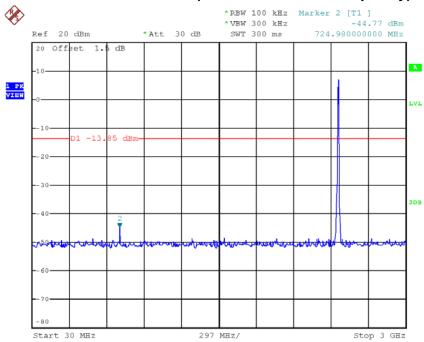


Date: 27.DEC.2017 19:22:09

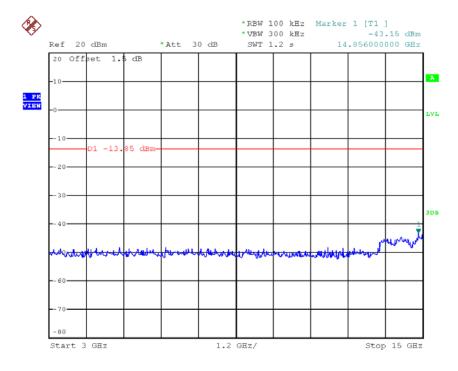




# TX B mode CH11 (10 Harmonic of the frequency)



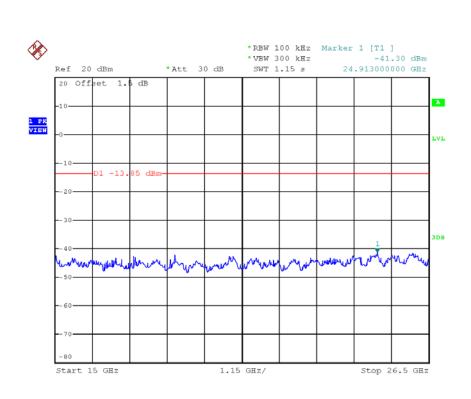
Date: 27.DEC.2017 19:23:33



Date: 27.DEC.2017 19:23:40







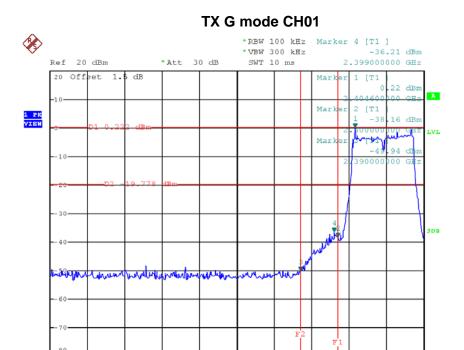
Date: 27.DEC.2017 19:23:48

Report No.: BTL-FCCP-3-1712C036





## Test Mode: TX G Mode



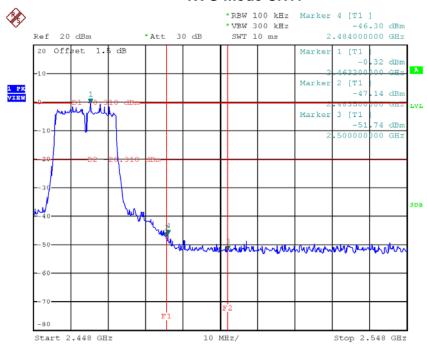
Date: 15.JAN.2018 08:52:45

Start 2.323 GHz

### TX G mode CH11

Stop 2.423 GHz

10 MHz/

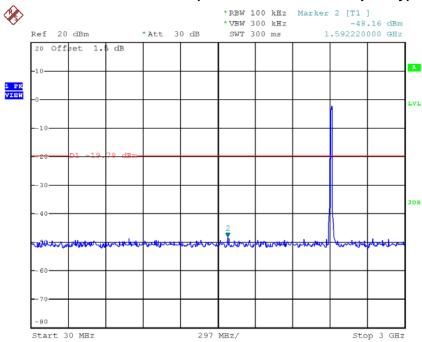


Date: 15.JAN.2018 08:55:01

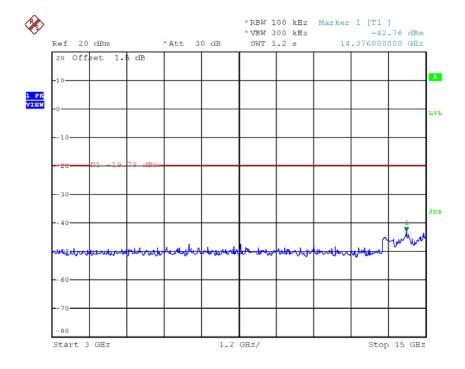








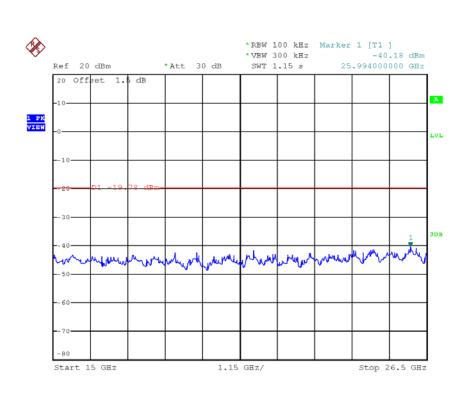
Date: 15.JAN.2018 08:52:58



Date: 15.JAN.2018 08:53:05

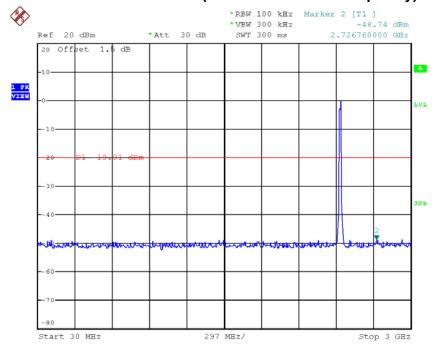






Date: 15.JAN.2018 08:53:12

# TX G mode CH06 (10 Harmonic of the frequency)

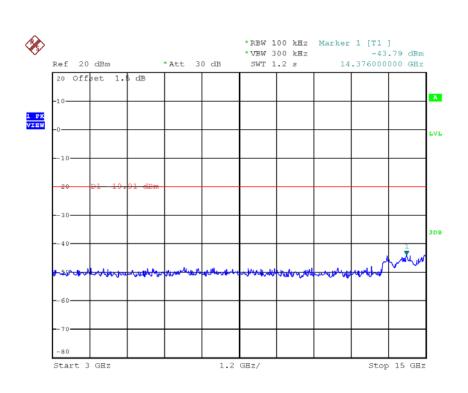


Date: 15.JAN.2018 08:54:04

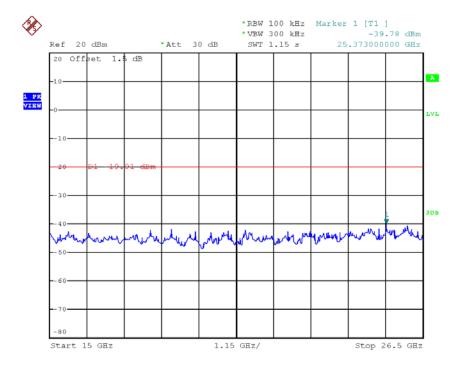
Report No.: BTL-FCCP-3-1712C036







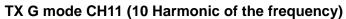
Date: 15.JAN.2018 08:54:11

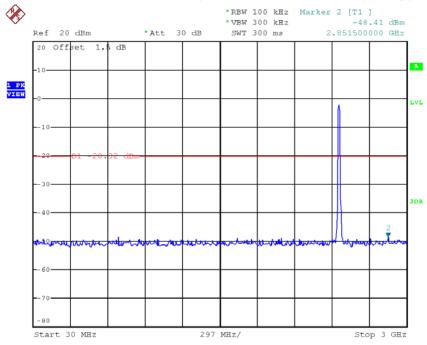


Date: 15.JAN.2018 08:54:18

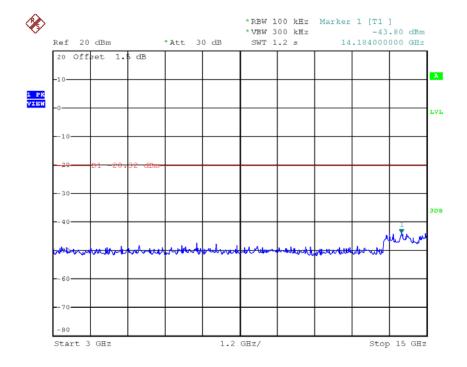








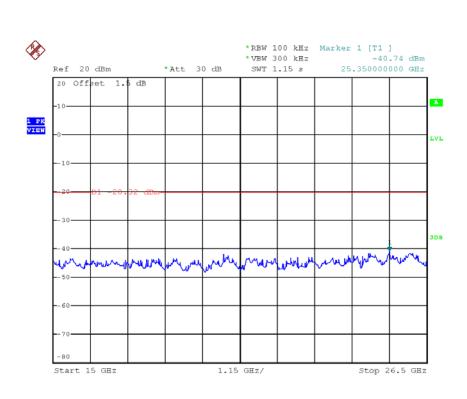
Date: 15.JAN.2018 08:55:15



Date: 15.JAN.2018 08:55:22







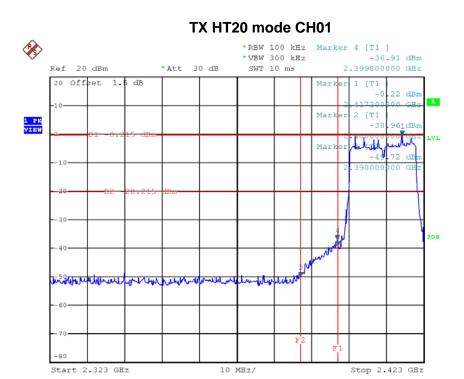
Date: 15.JAN.2018 08:55:29

Report No.: BTL-FCCP-3-1712C036



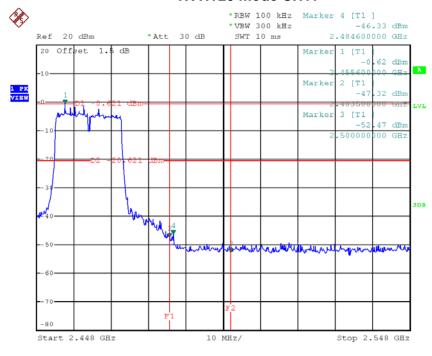






Date: 15.JAN.2018 08:57:53

### TX HT20 mode CH11

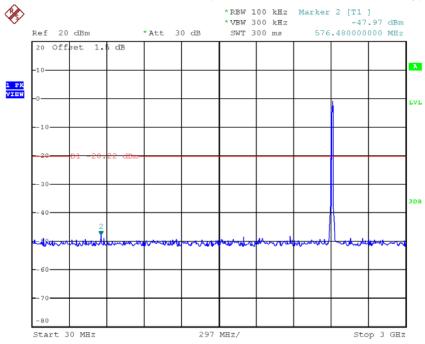


Date: 15.JAN.2018 09:00:28

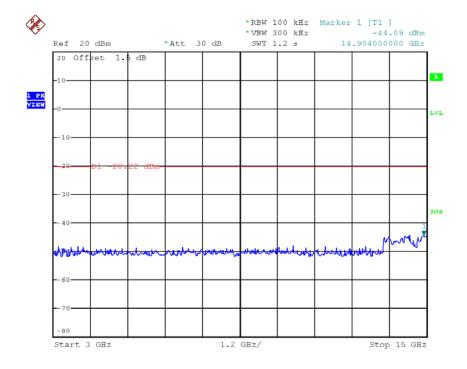








Date: 15.JAN.2018 08:58:06

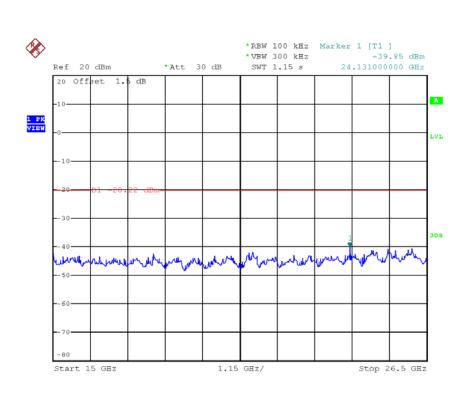


Date: 15.JAN.2018 08:58:13

Report No.: BTL-FCCP-3-1712C036

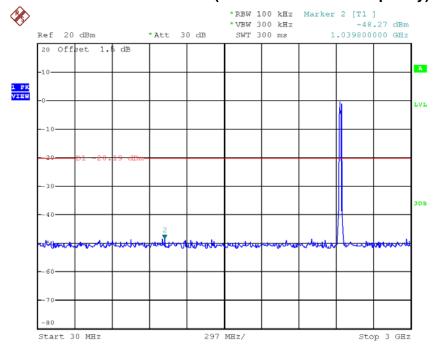






Date: 15.JAN.2018 08:58:21

# TX HT20 mode CH06 (10 Harmonic of the frequency)

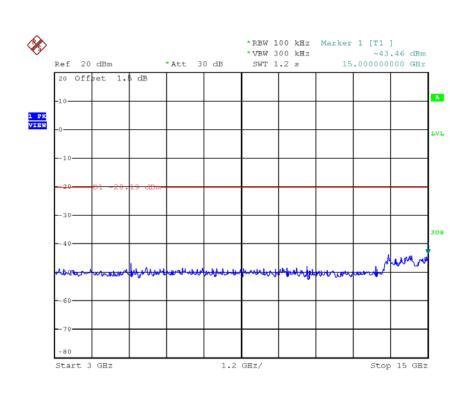


Date: 15.JAN.2018 08:59:31

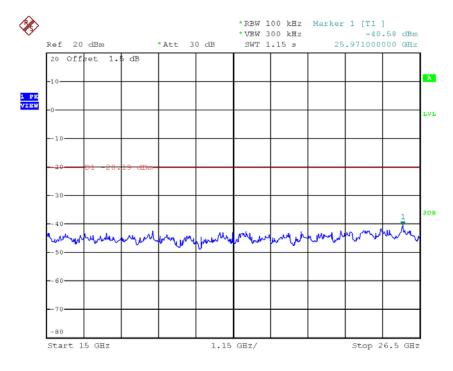
Report No.: BTL-FCCP-3-1712C036







Date: 15.JAN.2018 08:59:38

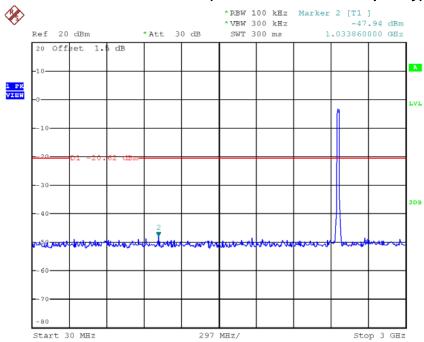


Date: 15.JAN.2018 08:59:45

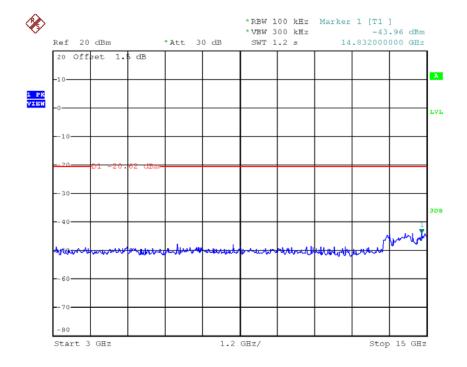




# TX HT20 mode CH11 (10 Harmonic of the frequency)



Date: 15.JAN.2018 09:00:41

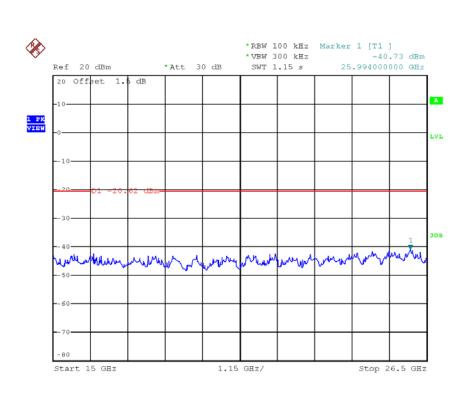


Date: 15.JAN.2018 09:00:48

Report No.: BTL-FCCP-3-1712C036





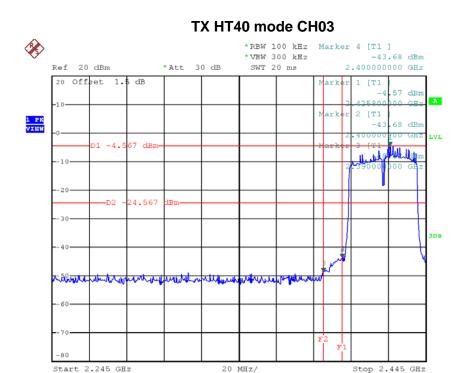


Date: 15.JAN.2018 09:00:55



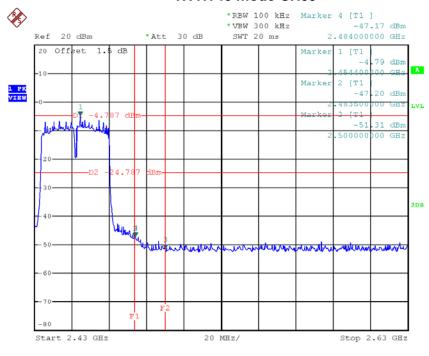






Date: 15.JAN.2018 09:03:45

### TX HT40 mode CH09

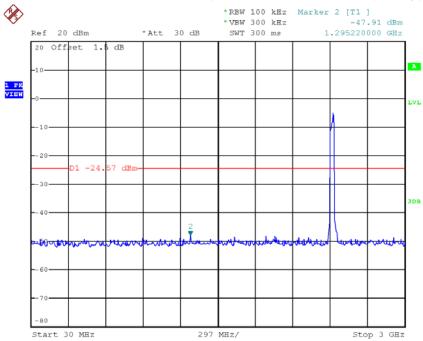


Date: 15.JAN.2018 09:10:47

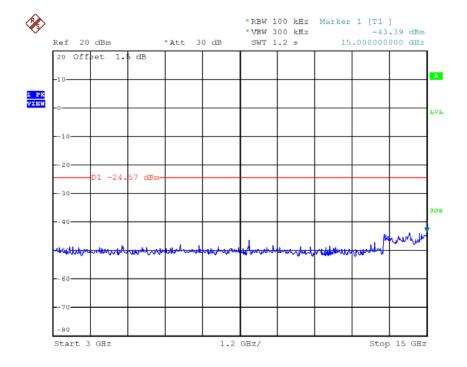




## TX HT40 mode CH03 (10 Harmonic of the frequency)



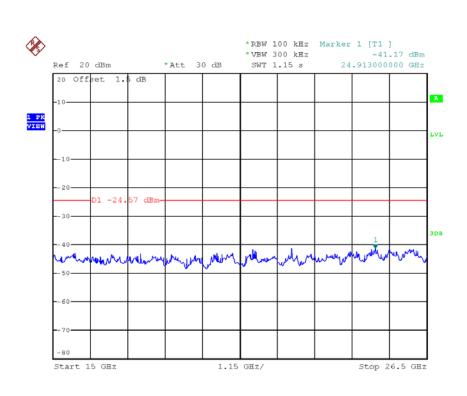
Date: 15.JAN.2018 09:03:57



Date: 15.JAN.2018 09:04:04

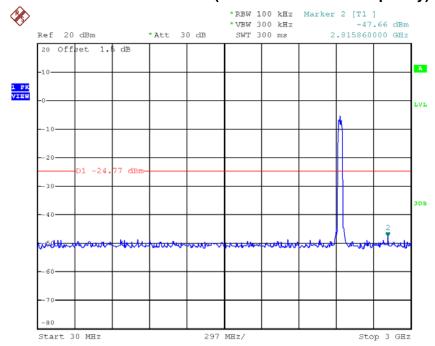






Date: 15.JAN.2018 09:04:12

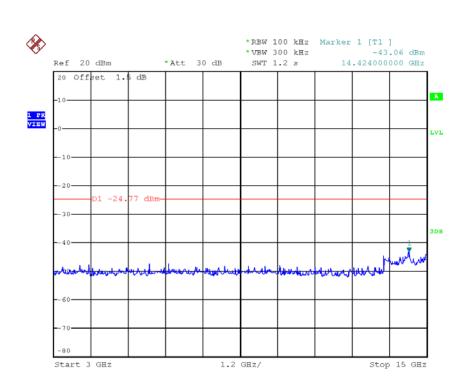
## TX HT40 mode CH06 (10 Harmonic of the frequency)



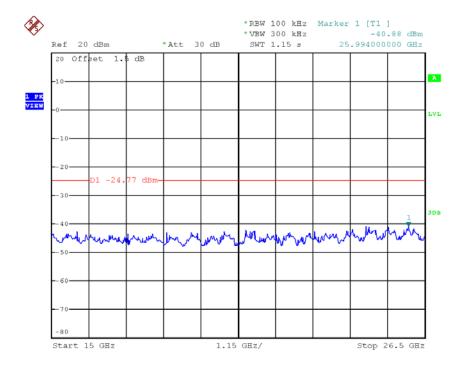
Date: 15.JAN.2018 09:05:04







Date: 15.JAN.2018 09:05:11

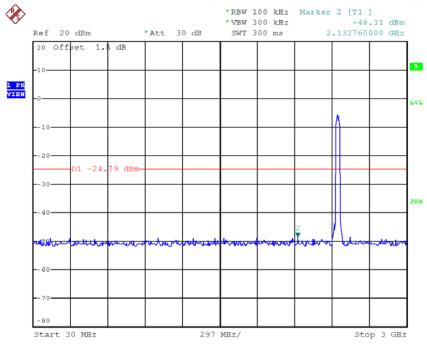


Date: 15.JAN.2018 09:05:18

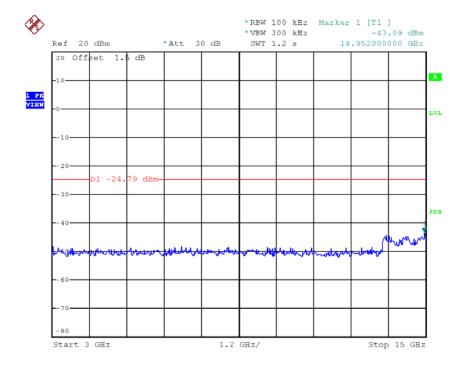




## TX HT40 mode CH09 (10 Harmonic of the frequency)



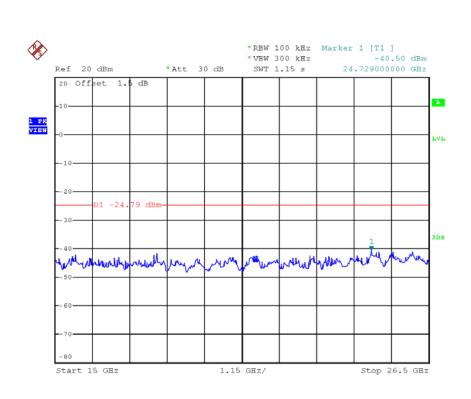
Date: 15.JAN.2018 09:11:00



Date: 15.JAN.2018 09:11:07







Date: 15.JAN.2018 09:11:14





APPENDIX H -	<b>POWER</b>	SPECTRA	L DENSITY

Report No.: BTL-FCCP-3-1712C036 Page 152 of 160





## Test Mode :TX B Mode\_CH01/06/11

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-6.83	0.2075	8.00	Complies
2437	-5.72	0.2679	8.00	Complies
2462	-8.21	0.1510	8.00	Complies

## TX CH01



Date: 27.DEC.2017 19:20:32

Report No.: BTL-FCCP-3-1712C036 Page 153 of 160









Date: 27.DEC.2017 19:22:18

### TX CH11



Date: 27.DEC.2017 19:23:58

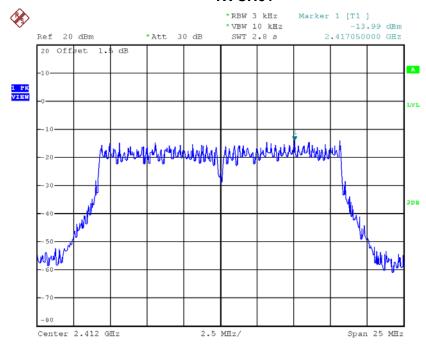




# Test Mode :TX G Mode\_CH01/06/11

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-13.99	0.0399	8.00	Complies
2437	-14.36	0.0366	8.00	Complies
2462	-13.77	0.0420	8.00	Complies

## TX CH01



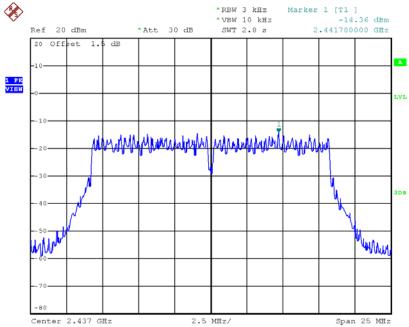
Date: 15.JAN.2018 08:53:20

Report No.: BTL-FCCP-3-1712C036 Page 155 of 160



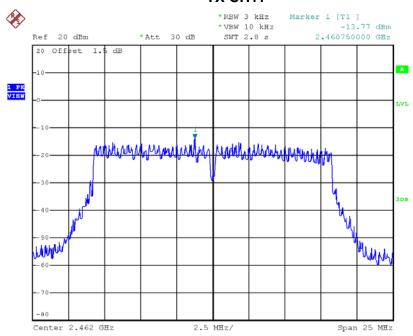






Date: 15.JAN.2018 08:54:26

### TX CH11



Date: 15.JAN.2018 08:55:38

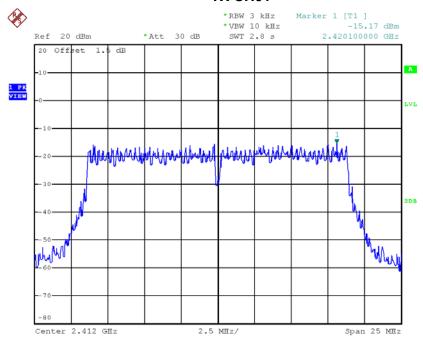




## Test Mode: TX N-20M Mode\_CH01/06/11

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-15.17	0.0304	8.00	Complies
2437	-15.55	0.0279	8.00	Complies
2462	-14.96	0.0319	8.00	Complies

### TX CH01

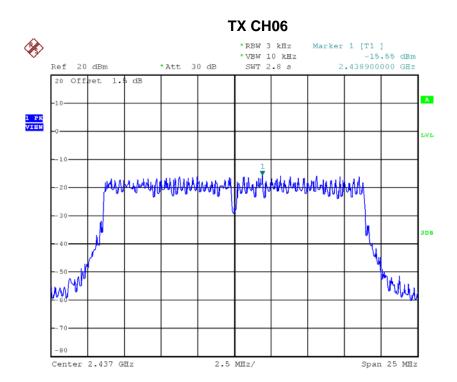


Date: 15.JAN.2018 08:58:29

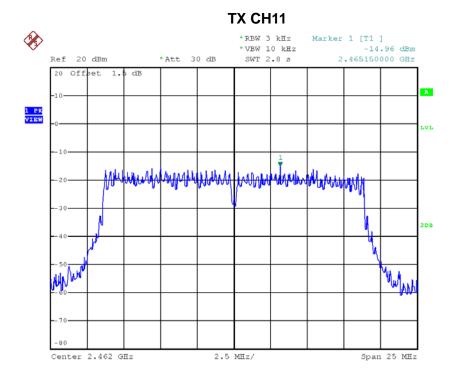
Report No.: BTL-FCCP-3-1712C036 Page 157 of 160







Date: 15.JAN.2018 08:59:53



Date: 15.JAN.2018 09:01:04

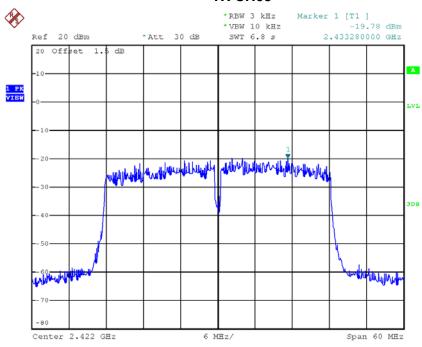




## Test Mode: TX N-40M Mode\_CH03/06/09

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2422	-19.78	0.0105	8.00	Complies
2437	-19.28	0.0118	8.00	Complies
2452	-19.53	0.0111	8.00	Complies

### **TX CH03**

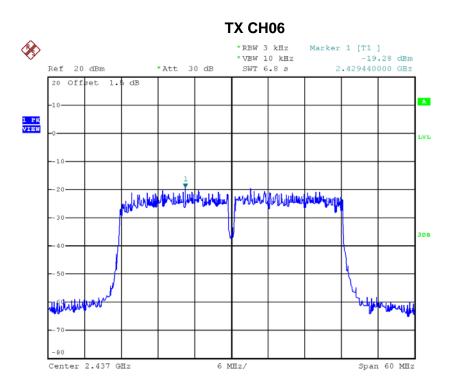


Date: 15.JAN.2018 09:04:23

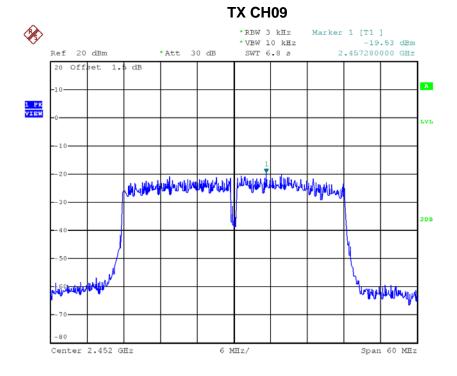
Report No.: BTL-FCCP-3-1712C036 Page 159 of 160







Date: 15.JAN.2018 09:05:30



Date: 15.JAN.2018 09:11:26