

FCC Radio Test Report

FCC ID: 2ABZMAP515

This report concerns (check	one): ⊠Original Grant □Class I Change □Class II Change
Project No. Equipment Model Name Applicant Address	1507C072A Wireless Access Point AP515 SHENZHEN IP-COM NETWORKS CO.,LTD. Room 101, Unit A, First Floor, Tower E3, No. 1001, Zhongshanyuan Road, Nanshan District, Shenzhen, China. 518052
Date of Receipt Date of Test Issued Date Tested by	Oct. 08, 2015 Oct. 08, 2015 ~ Oct. 28, 2015 Oct. 29, 2015 BTL Inc.
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Report No.: BTL-FCCP-1-1507C072A Page 1 of 138



Declaration

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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-1-1507C072A Page 2 of 138



Table of Contents	Page
1 . CERTIFICATION	6
2 . SUMMARY OF TEST RESULTS	7
2.1 TEST FACILITY	8
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	12
3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TES	TED 13
3.5 DESCRIPTION OF SUPPORT UNITS	13
4 . EMC EMISSION TEST	14
4.1 CONDUCTED EMISSION MEASUREMENT	14
4.1.1 POWER LINE CONDUCTED EMISSION LIMITS 4.1.2 TEST PROCEDURE	14 14
4.1.3 DEVIATION FROM TEST STANDARD	14
4.1.4 TEST SETUP	15
4.1.5 EUT OPERATING CONDITIONS 4.1.6 EUT TEST CONDITIONS	15 15
4.1.7 TEST RESULTS	15
4.2 RADIATED EMISSION MEASUREMENT	16
4.2.1 RADIATED EMISSION LIMITS 4.2.2 TEST PROCEDURE	16 17
4.2.3 DEVIATION FROM TEST STANDARD	17
4.2.4 TEST SETUP	18
4.2.5 EUT OPERATING CONDITIONS 4.2.6 EUT TEST CONDITIONS	19 19
4.2.7 TEST RESULTS (9KHZ TO 30MHZ)	20
4.2.8 TEST RESULTS (30MHZ TO 1000 MHZ)	20
4.2.9 TEST RESULTS (ABOVE 1000 MHZ)	20
5 . BANDWIDTH TEST	21
5.1 APPLIED PROCEDURES 5.1.1 TEST PROCEDURE	21 21
5.1.2 DEVIATION FROM STANDARD	21
5.1.3 TEST SETUP	21
5.1.4 EUT OPERATION CONDITIONS 5.1.5 EUT TEST CONDITIONS	21 21
5.1.6 TEST RESULTS	21
6 . MAXIMUM PEAK CONDUCTED OUTPUT POWER TEST	22

Report No.: BTL-FCCP-1-1507C072A Page 3 of 138



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	22 22 22 22 22 22 22 22
7 . ANTENNA CONDUCTED SPURIOUS EMISSION	23
7.1 APPLIED PROCEDURES / LIMIT	23
7.1.1 TEST PROCEDURE	23
7.1.2 DEVIATION FROM STANDARD 7.1.3 TEST SETUP	23 23
7.1.3 TEST SETOP 7.1.4 EUT OPERATION CONDITIONS	23
7.1.5 EUT TEST CONDITIONS	23
7.1.6 TEST RESULTS	23
8 . POWER SPECTRAL DENSITY TEST	24
8.1 APPLIED PROCEDURES / LIMIT	24
8.1.1 TEST PROCEDURE	24
8.1.2 DEVIATION FROM STANDARD 8.1.3 TEST SETUP	24 24
8.1.4 EUT OPERATION CONDITIONS	24
8.1.5 EUT TEST CONDITIONS	24
8.1.6 TEST RESULTS	24
9. MEASUREMENT INSTRUMENTS LIST	25
10 . EUT TEST PHOTO	27
ATTACHMENT A - CONDUCTED EMISSION	31
ATTACHMENT B - RADIATED EMISSION (9KHZ TO 30MHZ)	34
ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)	36
ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)	43
ATTACHMENT E - BANDWIDTH	92
ATTACHMENT F - MAXIMUM PEAK CONDUCTED OUTPUT POWER	101
ATTACHMENT G - ANTENNA CONDUCTED SPURIOUS EMISSION	105
ATTACHMENT H - POWER SPECTRAL DENSITY	124

Report No.: BTL-FCCP-1-1507C072A Page 4 of 138



REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-1-1507C072A	Original Issue.	Oct. 29, 2015

Report No.: BTL-FCCP-1-1507C072A Page 5 of 138



1. CERTIFICATION

Equipment : Wireless Access Point

Brand Name: IP-COM Model Name: AP515

Applicant : SHENZHEN IP-COM NETWORKS CO.,LTD. Manufacturer : SHENZHEN IP-COM NETWORKS CO.,LTD.

Address : Room 101, Unit A, First Floor, Tower E3, No. 1001, Zhongshanyuan Road,

Nanshan District, Shenzhen, China. 518052

Date of Test : Oct. 08, 2015 ~ Oct. 28, 2015

Test Sample: Engineering Sample

Standard(s): FCC Part15, Subpart C: 2014 (15.247) / ANSI C63.10-2013

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

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-1-1507C072A) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

Report No.: BTL-FCCP-1-1507C072A Page 6 of 138



2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

Applied Standard(s): FCC Part15 (15.247) , Subpart C: 2014				
Standard(s) Section	Test Item	Judgment	Remark	
15.207	Conducted Emission	PASS		
15.247(d)	Antenna conducted Spurious Emission	PASS		
15.247(a)(2)	6dB Bandwidth	PASS		
15.247(b)(3)	Peak Output Power	PASS		
15.247(e)	Power Spectral Density	PASS		
15.203	Antenna Requirement	PASS		
15.209/15.205	Transmitter Radiated Emissions	PASS		

NOTE:

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

Report No.: BTL-FCCP-1-1507C072A Page 7 of 138



2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China.

BTL's test firm number for FCC: 319330

2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. The BTL measurement uncertainty is less than the CISPR 16-4-2 U_{cispr} requirement.

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

A. Conducted Measurement:

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

B. Radiated Measurement:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)
		9KHz ~ 30MHz	٧	3.79
		9KHz ~ 30MHz	Н	3.57
		30MHz ~ 200MHz	V	3.82
		30MHz ~ 200MHz	Н	3.78
DG-CB03	CISPR	200MHz ~ 1,000MHz 200MHz ~ 1,000MHz	V	4.10
(3m)	CISEN		Н	4.06
		1GHz ~ 18GHz	٧	3.12
		1GHz ~ 18GHz	Н	3.68
		18GHz ~ 40GHz	٧	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-1-1507C072A Page 8 of 138



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless Access Point			
Brand Name	IP-COM			
Model Name	AP515	AP515		
Model Difference	NA			
	Operation Frequency	2412~2462 MHz		
Product Description	Modulation Technology	802.11b:DSSS 802.11g:OFDM 802.11n:OFDM		
	Bit Rate of Transmitter	802.11b: 11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6 Mbps 802.11n up to 300 Mbps		
	Output Power (Max.)	802.11b: 24.52 dBm 802.11g: 23.56 dBm 802.11n(20MHz): 25.07 dBm 802.11n(40MHz): 24.09 dBm		
Power Source	DC voltage supplied from PoE Power Supply. Manufacturer: SHENZHEN HEWEISHUN NETWORK TECHNOLOGY CO., LTD. Model: BN031-A65051			
Power Rating	I/P: AC100-240V 50/60Hz 1.5A O/P: DC 51V 1.25A			

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 – CH11 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		

Report No.: BTL-FCCP-1-1507C072A Page 9 of 138



3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	Internal	N/A	7	TX/RX
2	N/A	N/A	Internal	N/A	7	TX/RX

Note:

- (1) The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R), all transmit signals are completely uncorrelated, then, **Direction gain = Gant**, that is Directional gain=7 So, the out power limit is 30-7+6=29 the power density limit is 8-7+6=7.
- (2) For IEEE 802.11b/g mode (1TX/1RX):

The EUT supports the antenna with TX and RX diversity functions.

Both Ant. 1 and Ant. 2 support transmit and receive functions, but only one of them will be used at one time.

The Ant. 1 generated the worst case, so it was selected to test and record in the report. For IEEE 802.11n mode (2TX/2RX):

Both Ant. 1 and Ant. 2 can be used as transmitting/receiving antenna.

Ant. 1 and Ant. 2 could both transmit/receive simultaneously...

Report No.: BTL-FCCP-1-1507C072A Page 10 of 138



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 01/06/11	
Mode 2	TX G MODE CHANNEL 01/06/11	
Mode 3	TX N-20MHZ MODE CHANNEL 01/06/11	
Mode 4	TX N-40MHZ MODE CHANNEL 03/06/09	

Note

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

Report No.: BTL-FCCP-1-1507C072A Page 11 of 138



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		MTool	
Frequency (MHz)	2412	2437	2462
802.11b	85	86	70
802.11g	68	74	62
802.11n (20MHz)	42	68	56
Frequency (MHz)	2422	2437	2452
802.11n (40MHz)	45	66	41

Report No.: BTL-FCCP-1-1507C072A Page 12 of 138



3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED EUT 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
-	-	-	-	-

Report No.: BTL-FCCP-1-1507C072A Page 13 of 138



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 -0.5	66 to 56*	56 to 46*
0.50 -5.0	56	46
5.0 -30.0	60	50

Note:

- (1) The limit of " * " decreases with the logarithm of the frequency
- (2) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use) Margin Level = Measurement Value - Limit Value

The following table is the setting of the receiver

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

4.1.2 TEST PROCEDURE

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

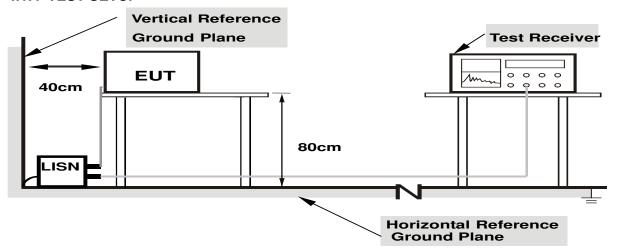
4.1.3 DEVIATION FROM TEST STANDARD

No deviation

Report No.: BTL-FCCP-1-1507C072A Page 14 of 138



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 Attachment A.

Report No.: BTL-FCCP-1-1507C072A Page 15 of 138



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS

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

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

Frequency	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

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

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).
- (4) The test result calculated as following: Measurement Value = Reading Level + Correct Factor Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use) Margin Level = Measurement Value - Limit Value

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

Report No.: BTL-FCCP-1-1507C072A Page 16 of 138



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

4.2.2 TEST PROCEDURE

- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8 m 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. 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.
- e. 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)
- f. 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)
- g. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.3 DEVIATION FROM TEST STANDARD

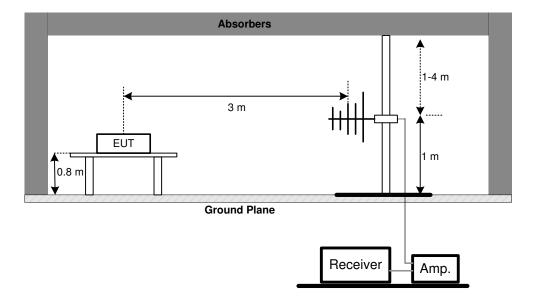
No deviation

Report No.: BTL-FCCP-1-1507C072A Page 17 of 138

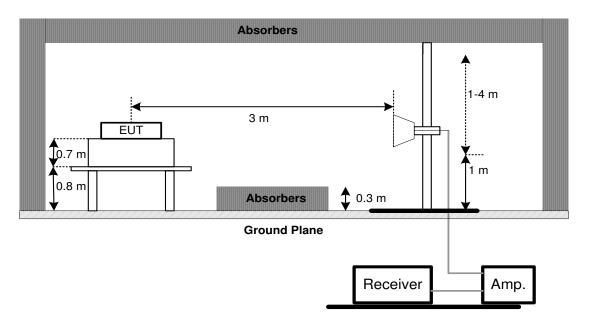


4.2.4 TEST SETUP

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



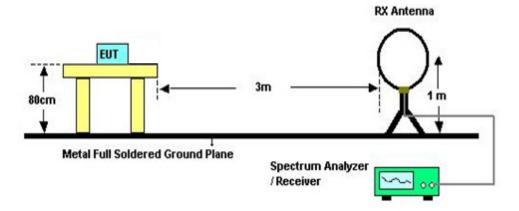
(B) Radiated Emission Test Set-Up Frequency Above 1 GHz



Report No.: BTL-FCCP-1-1507C072A Page 18 of 138



(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 110V/60Hz

Report No.: BTL-FCCP-1-1507C072A Page 19 of 138



4.2.7 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Attachment B

Remark:

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

4.2.8 TEST RESULTS (30MHZ TO 1000 MHZ)

Please refer to the Attachment C.

4.2.9 TEST RESULTS (ABOVE 1000 MHZ)

Please refer to the Attachment D.

Remark:

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

Report No.: BTL-FCCP-1-1507C072A Page 20 of 138



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 110V/60Hz

5.1.6 TEST RESULTS

Please refer to the Attachment E.

Report No.: BTL-FCCP-1-1507C072A Page 21 of 138



6. MAXIMUM PEAK CONDUCTED OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

	FCC Part15	5 (15.247) , Subpart (
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 v03r03.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP

EUT	Power Meter
	1 GWGI WIGGGI

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 110V/60Hz

6.1.6 TEST RESULTS

Please refer to the Attachment F.

Report No.: BTL-FCCP-1-1507C072A Page 22 of 138



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 110V/60Hz

7.1.6 TEST RESULTS

Please refer to the Attachment G.

Report No.: BTL-FCCP-1-1507C072A Page 23 of 138



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 110V/60Hz

8.1.6 TEST RESULTS

Please refer to the Attachment H.

Report No.: BTL-FCCP-1-1507C072A Page 24 of 138



9. MEASUREMENT INSTRUMENTS LIST

	Conducted Emission Measurement				
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	EMCO	699837	0052765	Mar. 28, 2016
2	LISN	R&S	ENV216	101447	Mar. 28, 2016
3	Test Cable	emci	RG223(9KHz -30MHz)	C_17	Mar. 13, 2016
4	EMI Test Receiver	R&S	ESCS30	826547/022	Mar. 28, 2016
5	50Ω Terminator	SHX	TF2-3G-A	08122901	Mar. 28, 2016
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1 -01	N/A	N/A

	Radiated Emission Measurement				
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarbeck	VULB9160	9160-3232	Mar. 28, 2016
2	Amplifier	HP	8447D	2944A09673	Nov. 17, 2015
3	Receiver	AGILENT	N9038A	MY5213003 9	Oct. 11, 2016
4	Test Cable	emci	LMR-400(30MH z-1GHz)	C-01	Jun. 28, 2016
5	Controller	CT	SC100	N/A	N/A
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
7	Antenna	ETS	3115	00075789	Mar. 28, 2016
8	Amplifier	Agilent	8449B	3008A02274	Nov. 02, 2015
9	Test Cable	emci	EMC104-SM-S M-10000(1GHz -26.5GHz)	C-68	Jun. 28, 2016
10	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Mar. 28, 2016
11	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 28, 2016
12	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Sep. 07, 2016
13	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Mar. 28, 2016
14	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	Aug. 16, 2015

Report No.: BTL-FCCP-1-1507C072A Page 25 of 138



		6dB Bandwidt	th Measureme	ent	
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Oct. 11, 2016

	Peak Output Power Measurement				
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	power Meter	ANRITSU	ML2495A	1128009	Mar. 28, 2016
2	Pulse Power Sensor	ANRITSU	MA 2411B	1027500	Mar. 28, 2016

	Antenna Conducted Spurious Emission Measurement				
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Oct. 11, 2016

		Power Spectral De	ensity Measur	ement	
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Oct. 11, 2016

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-1-1507C072A Page 26 of 138



10. EUT TEST PHOTO







Report No.: BTL-FCCP-1-1507C072A Page 27 of 138



Radiated Measurement Photos







Report No.: BTL-FCCP-1-1507C072A Page 28 of 138



Radiated Measurement Photos





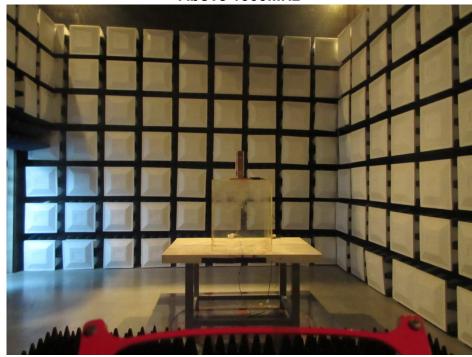


Report No.: BTL-FCCP-1-1507C072A Page 29 of 138



Radiated Measurement Photos

Above 1000MHz





Report No.: BTL-FCCP-1-1507C072A Page 30 of 138



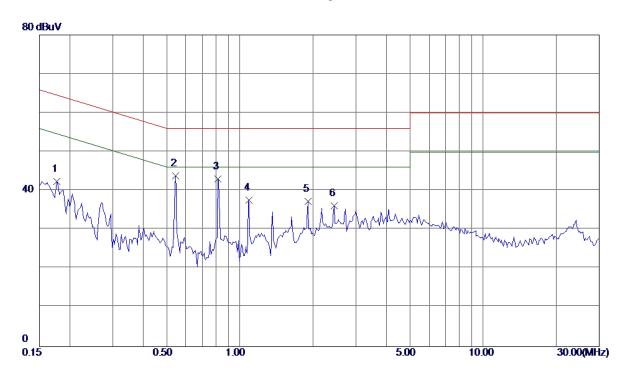
ATTACHMENT A - CONDUCTED EMISSION

Report No.: BTL-FCCP-1-1507C072A Page 31 of 138





Line



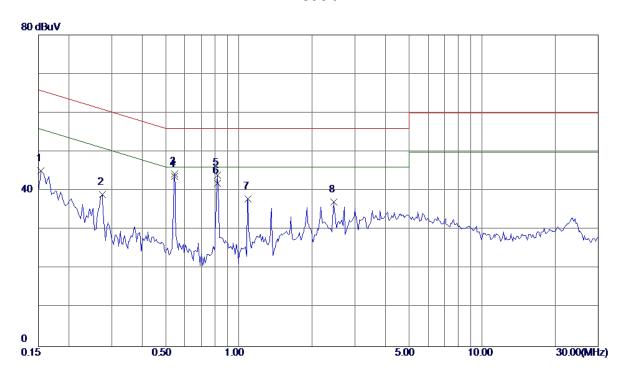
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0. 1773	32. 90	9. 56	42.46	64.61	-22. 15	Peak	
2	0. 5445	34. 18	9. 70	43.88	56. 00	-12. 12	Peak	
3	0.8141	33. 36	9. 75	43. 11	56.00	-12.89	Peak	
4	1.0875	27.72	9.81	37. 53	56.00	-18.47	Peak	
5	1.9040	27. 34	9. 90	37. 24	56.00	-18.76	Peak	
6	2.4470	26. 20	9. 99	36. 19	56.00	-19.81	Peak	

Report No.: BTL-FCCP-1-1507C072A Page 32 of 138





Neutral



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0. 1539	35. 63	9.49	45. 12	65. 79	-20.67	Peak	
2	0.2750	29. 52	9. 52	39.04	60.97	-21.93	Peak	
3	0. 5445	34.73	9. 56	44. 29	56.00	-11.71	Peak	
4	0. 5445	34. 20	9. 56	43.76	46.00	-2.24	AVG	
5	0.8180	34.47	9. 56	44.03	56.00	-11. 97	Peak	
6	0.8180	32.40	9. 56	41.96	46.00	-4.04	AVG	
7	1.0875	28. 31	9. 60	37.91	56.00	-18. 09	Peak	
8	2. 4547	27. 35	9. 76	37. 11	56.00	-18.89	Peak	

Report No.: BTL-FCCP-1-1507C072A Page 33 of 138



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

Report No.: BTL-FCCP-1-1507C072A Page 34 of 138



Test Mode: TX B MODE CHANNEL	NEL 01
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Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Note
0.0097	0°	13.62	24.9523	38.5723	127.8688	-89.2965	AVG
0.0097	0°	14.11	24.9523	39.0623	147.8688	-108.8065	PEAK
0.0216	0°	6.22	24.1987	30.4187	120.9151	-90.4965	AVG
0.0216	0°	8.72	24.1987	32.9187	140.9151	-107.9965	PEAK
0.0411	0°	3.21	22.9637	26.1737	115.3274	-89.1537	AVG
0.0411	0°	5.83	22.9637	28.7937	135.3274	-106.5337	PEAK
0.0623	0°	1.26	22.1540	23.4140	111.7145	-88.3005	AVG
0.0623	0°	2.13	22.1540	24.2840	131.7145	-107.4305	PEAK
0.5176	0°	19.51	19.8563	39.3663	73.3243	-33.9580	QP
1.6107	0°	23.15	19.5389	42.6889	63.4639	-20.7750	QP

Frequency (MHz)	Ant 0°/90°	Read level dBuV/m	Factor (dB)	Measured(FS) (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Note
0.0091	90°	14.01	24.3000	38.3100	128.4234	-90.1134	AVG
0.0091	90°	14.41	24.3000	38.7100	148.4234	-109.7134	PEAK
0.0153	90°	7.12	24.3000	31.4200	123.9104	-92.4904	AVG
0.0153	90°	8.04	24.3000	32.3400	143.9104	-111.5704	PEAK
0.0301	90°	5.61	23.6603	29.2703	118.0329	-88.7626	AVG
0.0301	90°	6.11	23.6603	29.7703	138.0329	-108.2626	PEAK
0.0438	90°	1.89	22.7927	24.6827	114.7747	-90.0921	AVG
0.0438	90°	2.31	22.7927	25.1027	134.7747	-109.6721	PEAK
0.6921	90°	22.56	20.4147	42.9747	70.8008	-27.8261	QP
1.3151	90°	24.57	19.5685	44.1385	65.2250	-21.0866	QP

Report No.: BTL-FCCP-1-1507C072A Page 35 of 138



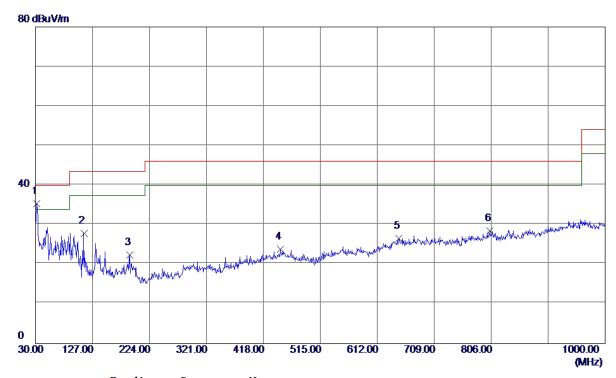
ATTACHMENT C - RADIATED EMISSION (30MHZ TO 1000MHZ)

Report No.: BTL-FCCP-1-1507C072A Page 36 of 138





Vertical



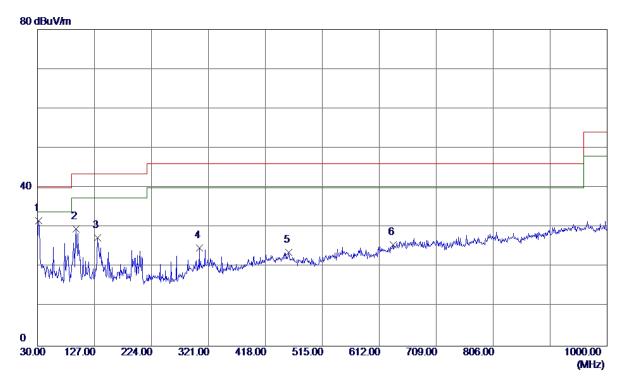
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	31.9400	49. 20	-13.89	35. 31	40.00	-4.69	Peak	
2	112. 4500	41.28	-13.50	27.78	43.50	-15.72	Peak	
3	190.0500	35. 40	-12. 99	22.41	43.50	-21.09	Peak	
4	447. 1000	29.84	-5. 97	23.87	46.00	-22. 13	Peak	
5	648.8600	28. 23	-1.71	26. 52	46.00	-19.48	Peak	
6	804.0600	28. 29	0. 16	28. 45	46.00	-17.55	Peak	

Report No.: BTL-FCCP-1-1507C072A Page 37 of 138





Horizontal

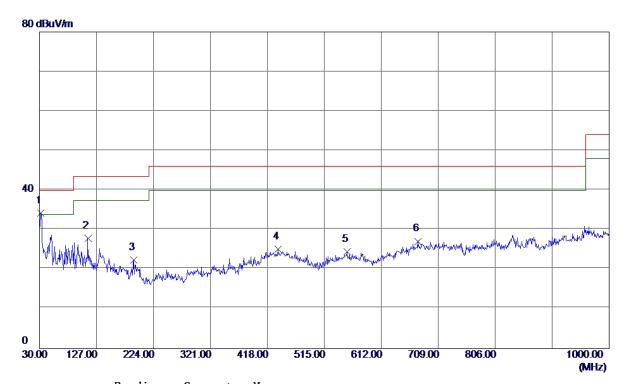


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	31.9400	45. 52	-13.89	31.63	40.00	-8. 37	Peak	
2	95. 9600	44.93	-15. 35	29. 58	43.50	-13.92	Peak	
3	132.8200	38. 81	-11.52	27. 29	43.50	-16. 21	Peak	
4	305. 4800	34.49	-9.62	24.87	46.00	-21. 13	Peak	
5	457.7700	29. 75	-6. 13	23. 62	46.00	-22. 38	Peak	
6	635. 2800	28. 15	-2. 52	25. 63	46.00	-20. 37	Peak	





Vertical



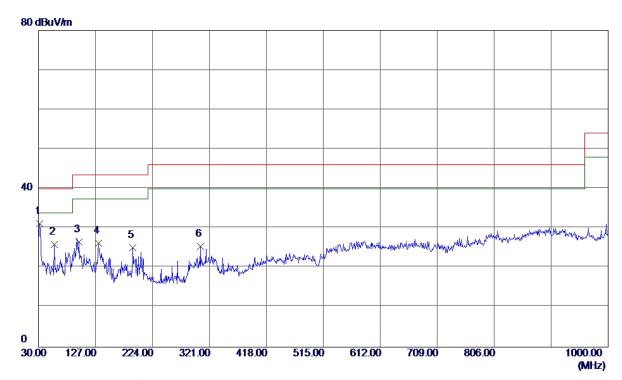
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	31.9400	48. 20	-13.89	34. 31	40.00	-5. 69	Peak	
2	112.4500	41.28	-13.50	27.78	43.50	-15.72	Peak	
3	190.0500	35. 40	-12. 99	22.41	43.50	-21.09	Peak	
4	436. 4300	31.46	-6. 27	25. 19	46.00	-20.81	Peak	
5	553.8000	29. 12	-4.62	24. 50	46.00	-21. 50	Peak	
6	674. 0800	28. 68	-1. 56	27. 12	46.00	-18.88	Peak	

Report No.: BTL-FCCP-1-1507C072A Page 39 of 138





Horizontal



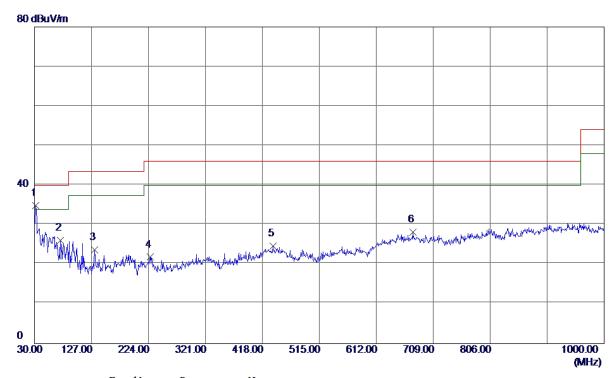
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	31.9400	45.02	-13.89	31. 13	40.00	-8.87	Peak	
2	57. 1600	38. 96	-13.02	25. 94	40.00	-14.06	Peak	
3	98.8700	41.38	-14.87	26. 51	43.50	-16.99	Peak	
4	132.8200	37.81	-11. 52	26. 29	43.50	-17.21	Peak	
5	191. 0200	38. 19	-13. 05	25. 14	43.50	-18. 36	Peak	
6	305. 4800	34.99	-9.62	25. 37	46.00	-20.63	Peak	

Report No.: BTL-FCCP-1-1507C072A Page 40 of 138





Vertical



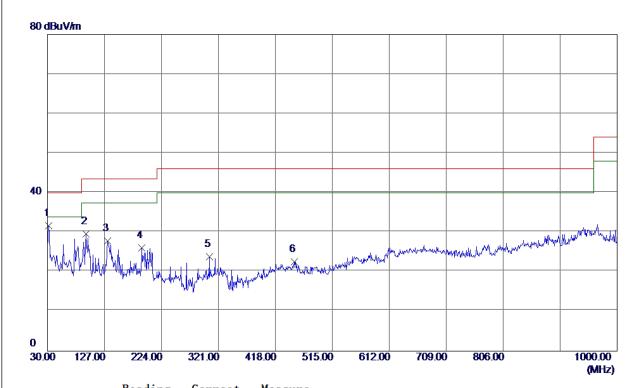
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	31.9400	48.70	-13.89	34.81	40.00	-5. 19	Peak	
2	74.6200	41.35	-15. 22	26. 13	40.00	-13.87	Peak	
3	132.8200	35. 22	-11. 52	23. 70	43.50	-19.80	Peak	
4	226. 9100	34.79	-12. 95	21.84	46.00	-24. 16	Peak	
5	436. 4300	30.96	-6. 27	24.69	46.00	-21. 31	Peak	
6	674. 0800	29. 68	-1. 56	28. 12	46.00	-17.88	Peak	

Report No.: BTL-FCCP-1-1507C072A Page 41 of 138





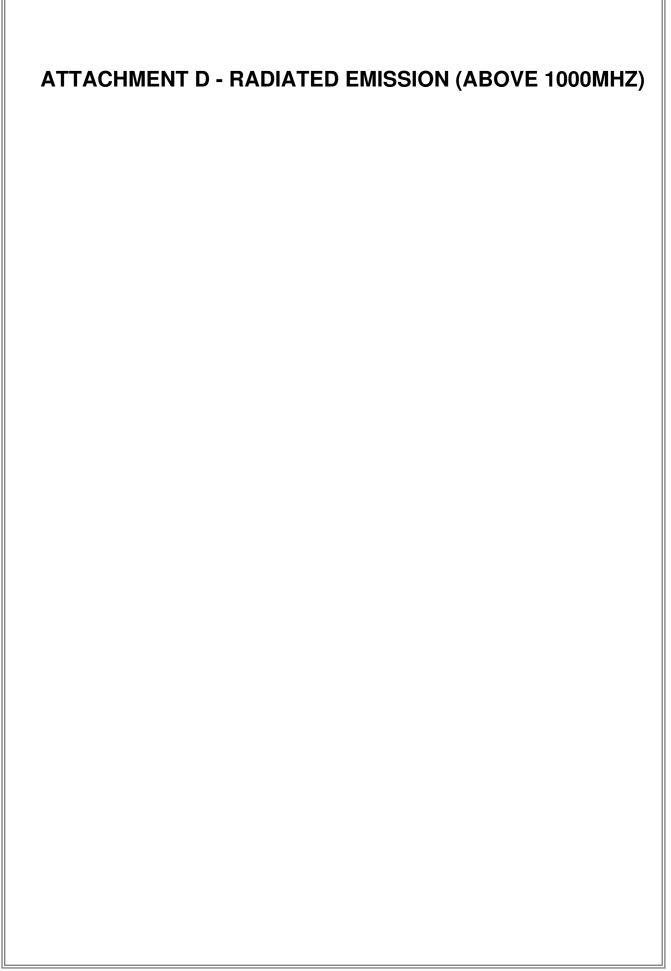
Horizontal



No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	31.9400	45. 52	-13.89	31.63	40.00	-8. 37	Peak	
2	95. 9600	44. 93	-15. 35	29. 58	43.50	-13.92	Peak	
3	132.8200	39. 31	-11. 52	27. 79	43.50	-15.71	Peak	
4	191.0200	39. 19	-13. 05	26. 14	43.50	-17. 36	Peak	
5	305. 4800	33. 49	-9.62	23.87	46.00	-22. 13	Peak	
6	450.0100	28. 46	-5. 90	22. 56	46.00	-23.44	Peak	

Report No.: BTL-FCCP-1-1507C072A Page 42 of 138



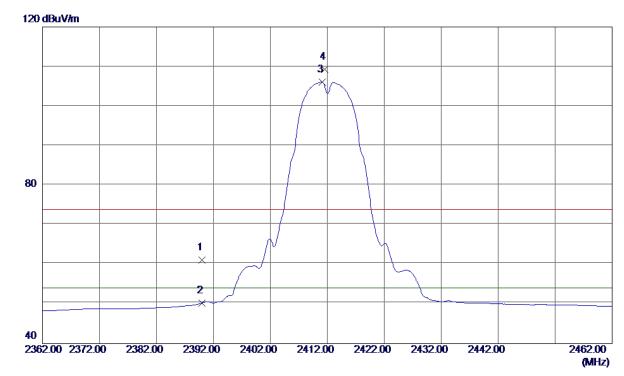


Report No.: BTL-FCCP-1-1507C072A Page 43 of 138



Orthogonal Axis: X
Test Mode: TX B MODE 2412MHz

Vertical



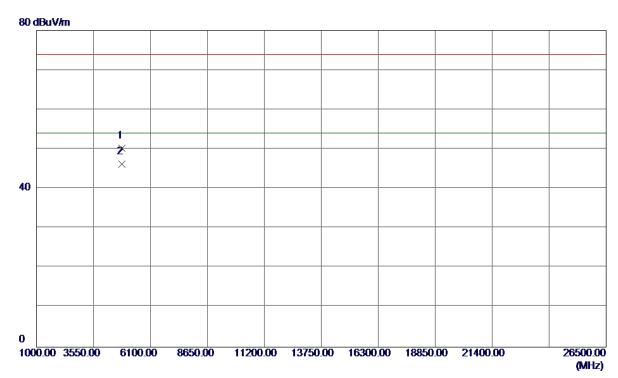
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	26. 89	34. 23	61. 12	74.00	-12.88	Peak	
2	2390.0000	16. 05	34. 23	50. 28	54.00	-3.72	AVG	
3	2411. 1000	71. 76	34. 35	106. 11	54.00	52. 11	AVG	No Limit
4	2411.6000	74. 99	34. 36	109. 35	74.00	35. 35	Peak	No Limit

Report No.: BTL-FCCP-1-1507C072A Page 44 of 138



Test Mode: TX B MODE 2412MHz

Vertical



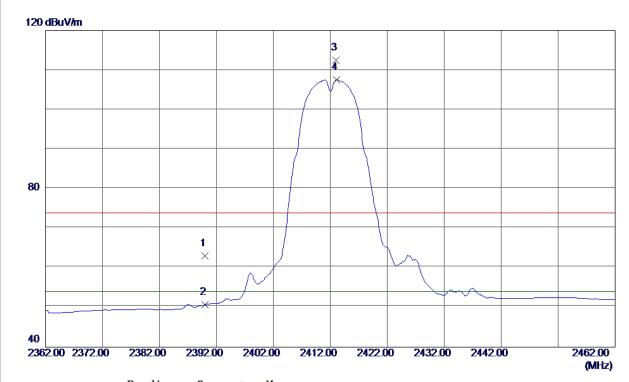
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4824. 1020	47. 26	3.00	50. 26	74.00	-23.74	Peak	
2	4824. 1020	43. 29	3.00	46. 29	54.00	-7.71	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 45 of 138



Test Mode: TX B MODE 2412MHz

Horizontal



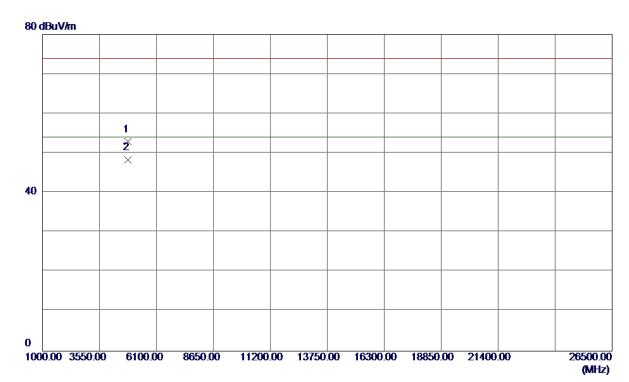
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	28.83	34. 23	63.06	74.00	-10.94	Peak	
2	2390.0000	16. 47	34. 23	50.70	54.00	-3.30	AVG	
3	2413.0000	78. 16	34. 37	112. 53	74.00	38. 53	Peak	No Limit
4	2413. 1000	73. 16	34. 37	107. 53	54.00	53. 53	AVG	No Limit

Report No.: BTL-FCCP-1-1507C072A Page 46 of 138



Test Mode: TX B MODE 2412MHz

Horizontal



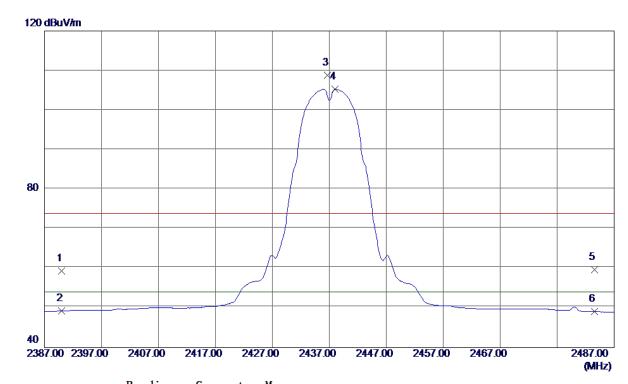
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4824.0530	49.88	3.00	52.88	74.00	-21.12	Peak	
2	4824. 1000	45. 27	3.00	48. 27	54.00	-5. 73	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 47 of 138



Orthogonal Axis: X
Test Mode: TX B MODE 2437MHz

Vertical



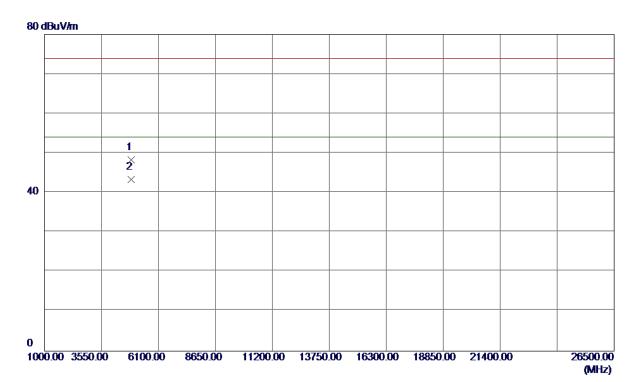
No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	25. 13	34. 23	59. 36	74.00	-14.64	Peak	
2	2390.0000	15. 03	34. 23	49. 26	54.00	-4.74	AVG	
3	2436.7000	74. 31	34. 50	108.81	74.00	34.81	Peak	No Limit
4	2438.0000	70.84	34. 51	105. 35	54.00	51.35	AVG	No Limit
5	2483. 5000	24. 95	34.77	59. 72	74.00	-14. 28	Peak	
6	2483. 5000	14. 32	34.77	49. 09	54.00	-4.91	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 48 of 138



Orthogonal Axis: X
Test Mode: TX B MODE 2437MHz

Vertical



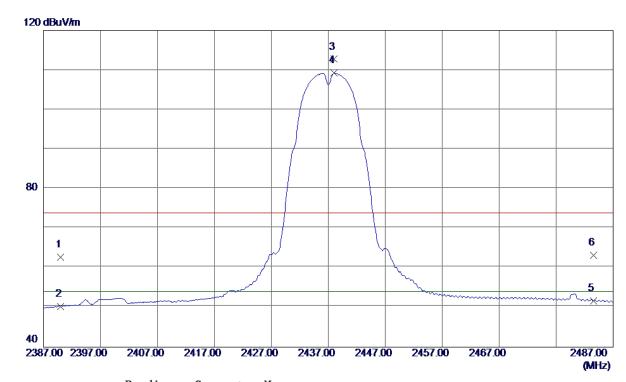
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4873.9900	45. 24	3.03	48. 27	74.00	-25.73	Peak	
2	4873. 9900	40. 28	3. 03	43. 31	54.00	-10.69	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 49 of 138



Test Mode: TX B MODE 2437MHz

Horizontal



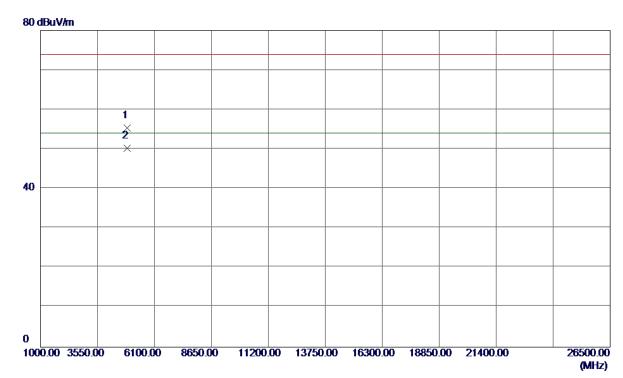
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	28. 45	34. 23	62. 68	74.00	-11. 32	Peak	
2	2390. 0000	16. 02	34. 23	50. 25	54.00	-3.75	AVG	
3	2438. 0000	78. 21	34.51	112.72	74.00	38.72	Peak	No Limit
4	2438. 0000	74.71	34. 51	109. 22	54.00	55. 22	AVG	No Limit
5	2483. 5000	16. 84	34.77	51. 61	54.00	-2. 39	AVG	
6	2483. 5250	28. 50	34.77	63. 27	74.00	-10.73	Peak	

Report No.: BTL-FCCP-1-1507C072A Page 50 of 138



Test Mode: TX B MODE 2437MHz

Horizontal



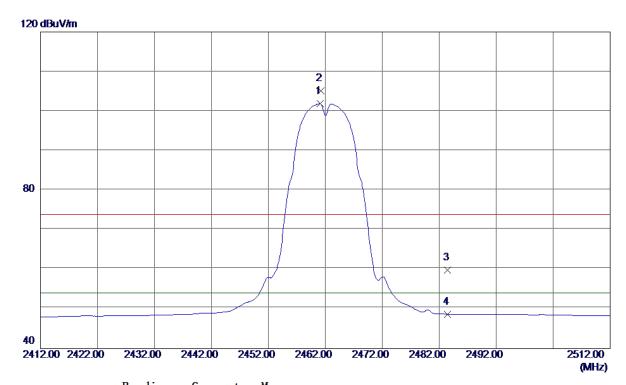
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0870	52. 27	3. 03	55. 30	74.00	-18.70	Peak	
2	4874. 0870	47. 24	3. 03	50. 27	54.00	-3.73	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 51 of 138



Orthogonal Axis: X
Test Mode: TX B MODE 2462MHz

Vertical



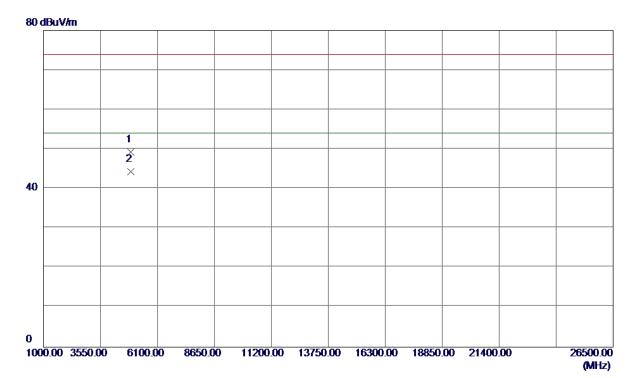
No	o. Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin			
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment	
1	2461. 100	00 67.27	34.64	101.91	54.00	47.91	AVG	No Limit	
2	2461. 200	00 70.53	34.64	105. 17	74.00	31. 17	Peak	No Limit	
3	2483. 500	00 25. 09	34.77	59.86	74.00	-14.14	Peak		
4	2483. 500	00 13.93	34.77	48.70	54.00	-5. 30	AVG		

Report No.: BTL-FCCP-1-1507C072A Page 52 of 138



Orthogonal Axis: X
Test Mode: TX B MODE 2462MHz

Vertical



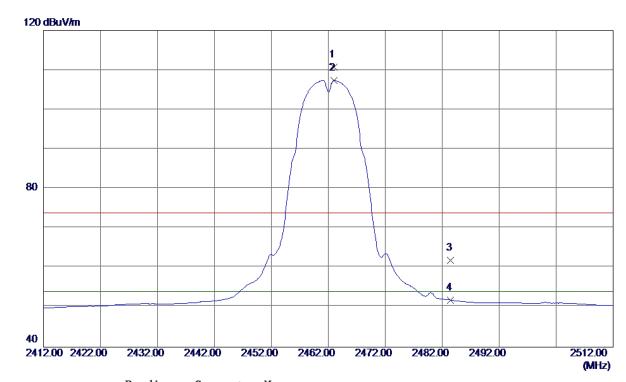
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4924. 1269	46. 30	3.05	49. 35	74.00	-24.65	Peak	
2	4924. 1269	41. 30	3. 05	44. 35	54.00	-9. 65	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 53 of 138



Test Mode: TX B MODE 2462MHz

Horizontal



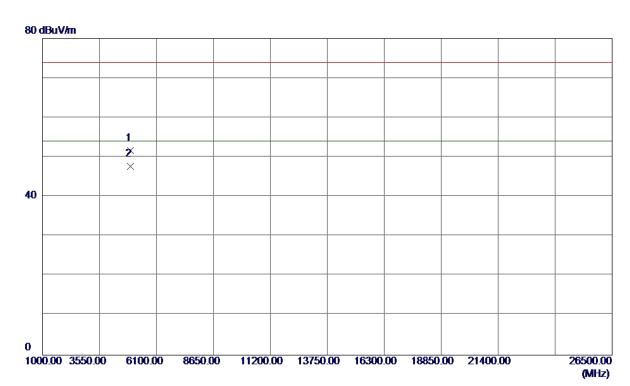
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2463.0000	76. 03	34.66	110.69	74.00	36. 69	Peak	No Limit
2	2463.0000	72.76	34.66	107.42	54.00	53.42	AVG	No Limit
3	2483. 5000	27. 21	34.77	61.98	74.00	-12.02	Peak	
4	2483. 5000	17. 11	34.77	51.88	54.00	-2. 12	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 54 of 138



Test Mode: TX B MODE 2462MHz

Horizontal



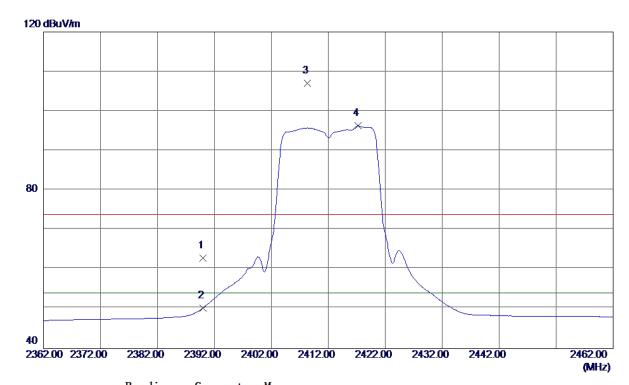
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4924. 2580	48. 57	3. 05	51.62	74.00	-22. 38	Peak	
2	4924. 2580	44.69	3. 05	47.74	54.00	-6. 26	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 55 of 138



Orthogonal Axis: X
Test Mode: TX G MODE 2412MHz

Vertical



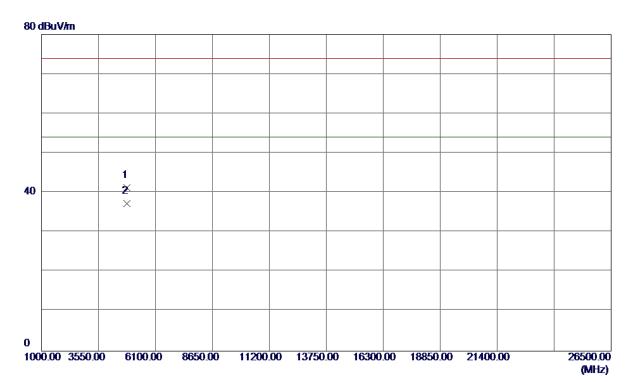
No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	28.66	34. 23	62.89	74.00	-11. 11	Peak	
2	2390.0000	16. 01	34. 23	50. 24	54.00	-3.76	AVG	
3	2408. 3000	72. 75	34. 34	107.09	74.00	33. 09	Peak	No Limit
4	2417. 2000	61. 90	34. 39	96. 29	54.00	42. 29	AVG	No Limit

Report No.: BTL-FCCP-1-1507C072A Page 56 of 138



Test Mode: TX G MODE 2412MHz

Vertical



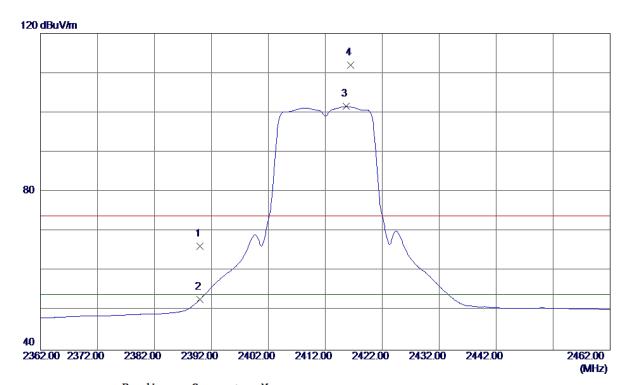
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4824.5600	38. 25	3.00	41. 25	74.00	-32.75	Peak	
2	4824.5600	34. 26	3.00	37. 26	54.00	-16. 74	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 57 of 138



Test Mode: TX G MODE 2412MHz

Horizontal



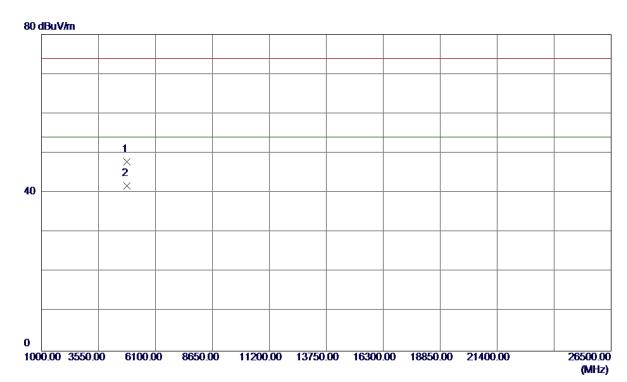
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	31. 97	34. 23	66. 20	74.00	-7.80	Peak	
2	2390.0000	18.61	34. 23	52.84	54.00	-1. 16	AVG	
3	2415.7000	67. 16	34. 38	101.54	54.00	47.54	AVG	No Limit
4	2416. 4000	77. 55	34. 39	111. 94	74.00	37.94	Peak	No Limit

Report No.: BTL-FCCP-1-1507C072A Page 58 of 138



Test Mode: TX G MODE 2412MHz

Horizontal



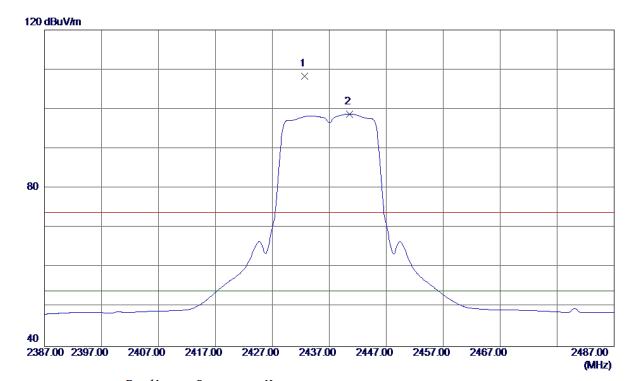
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4823.9700	44.88	3.00	47.88	74.00	-26. 12	Peak	
2	4823.9700	38. 80	3. 00	41.80	54.00	-12. 20	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 59 of 138



Orthogonal Axis: X
Test Mode: TX G MODE 2437MHz

Vertical



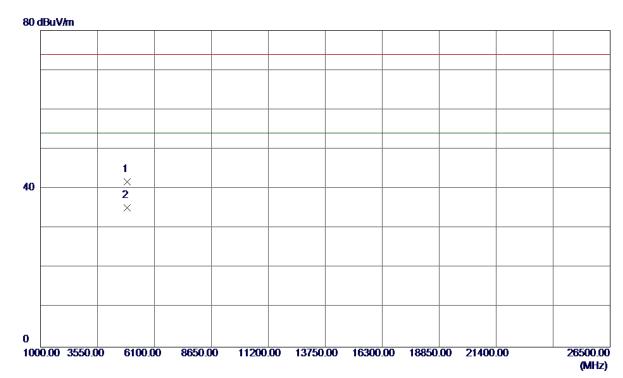
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2432.7000	73. 90	34.48	108.38	74.00	34. 38	Peak	No Limit
2	2440. 6000	64. 26	34. 53	98. 79	54.00	44. 79	AVG	No Limit

Report No.: BTL-FCCP-1-1507C072A Page 60 of 138



Test Mode: TX G MODE 2437MHz

Vertical



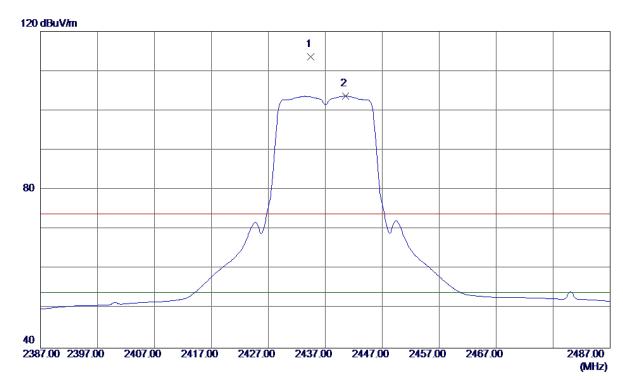
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874. 1060	38. 69	3. 03	41.72	74.00	-32. 28	Peak	
2	4874. 1060	32. 17	3. 03	35. 20	54.00	-18.80	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 61 of 138



Test Mode: TX G MODE 2437MHz

Horizontal



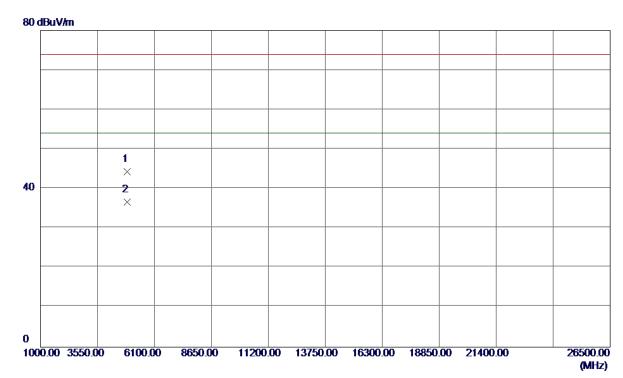
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2434.4000	79. 17	34.49	113.66	74.00	39.66	Peak	No Limit
2	2440.6000	69. 12	34. 53	103.65	54.00	49.65	AVG	No Limit

Report No.: BTL-FCCP-1-1507C072A Page 62 of 138



Orthogonal Axis: X
Test Mode: TX G MODE 2437MHz

Horizontal



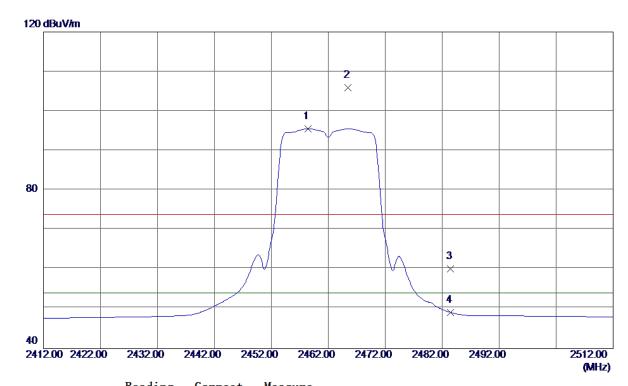
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874. 2400	41.28	3.03	44.31	74.00	-29.69	Peak	
2	4874. 2400	33. 56	3. 03	36. 59	54.00	-17.41	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 63 of 138



Orthogonal Axis: X
Test Mode: TX G MODE 2462MHz

Vertical



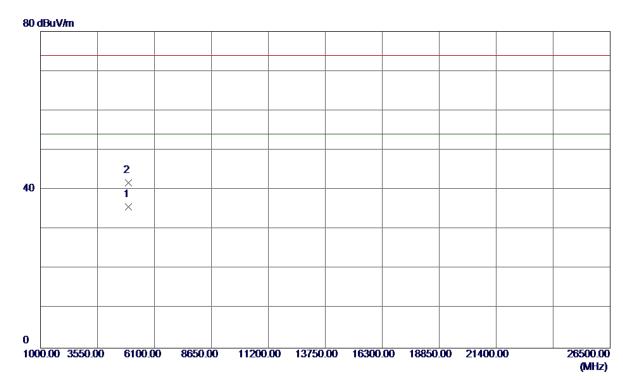
No.	Freq.	Keading Level	Factor	measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2458. 4000	60. 93	34.63	95. 56	54.00	41.56	AVG	No Limit
2	2465. 5000	71. 29	34. 67	105. 96	74.00	31.96	Peak	No Limit
3	2483. 5000	25. 46	34.77	60. 23	74.00	-13.77	Peak	
4	2483. 5000	14. 36	34.77	49. 13	54.00	-4.87	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 64 of 138



Test Mode: TX G MODE 2462MHz

Vertical



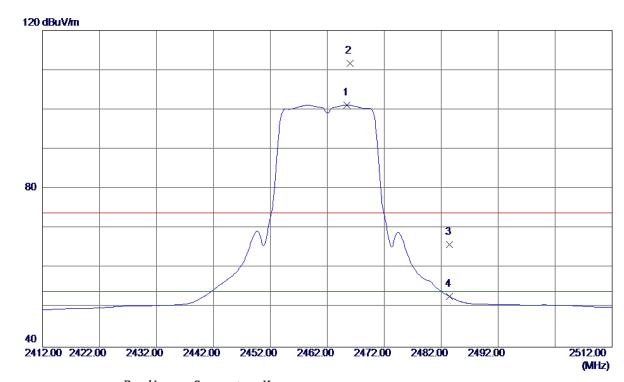
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4924. 2900	32. 58	3. 05	35. 63	54.00	-18. 37	AVG	
2	4924. 5800	38. 70	3. 05	41.75	74.00	-32. 25	Peak	

Report No.: BTL-FCCP-1-1507C072A Page 65 of 138



Test Mode: TX G MODE 2462MHz

Horizontal



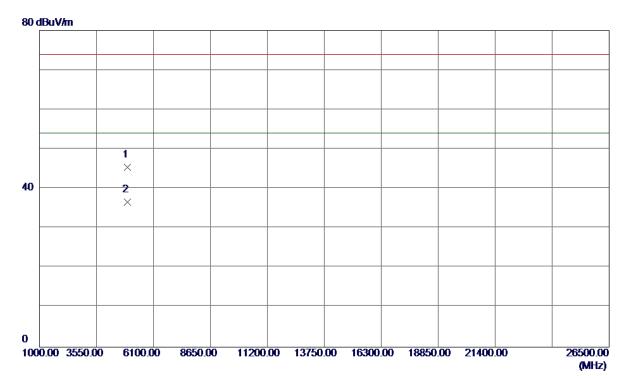
N	lo.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2465. 5000	66. 49	34.67	101. 16	54.00	47. 16	AVG	No Limit
2	?	2466.0000	76. 94	34.67	111.61	74.00	37.61	Peak	No Limit
3	3	2483. 5000	31. 17	34.77	65. 94	74.00	-8. 06	Peak	
4		2483. 5000	18. 00	34.77	52. 77	54.00	-1.23	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 66 of 138



Test Mode: TX G MODE 2462MHz

Horizontal



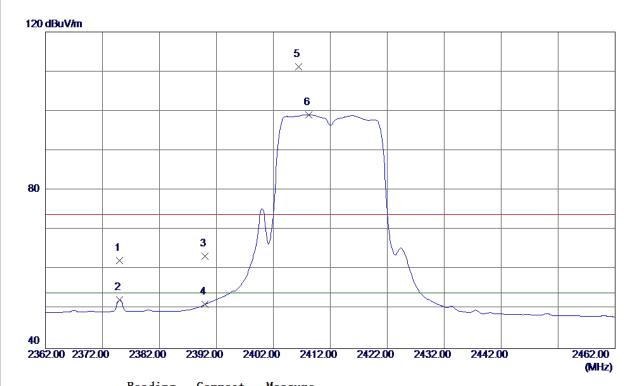
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4924. 5400	42.40	3. 05	45. 45	74.00	-28. 55	Peak	
2	4924. 5400	33. 58	3. 05	36. 63	54.00	-17. 37	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 67 of 138



Orthogonal Axis: X
Test Mode: TX N-20M MODE 2412MHz

Vertical



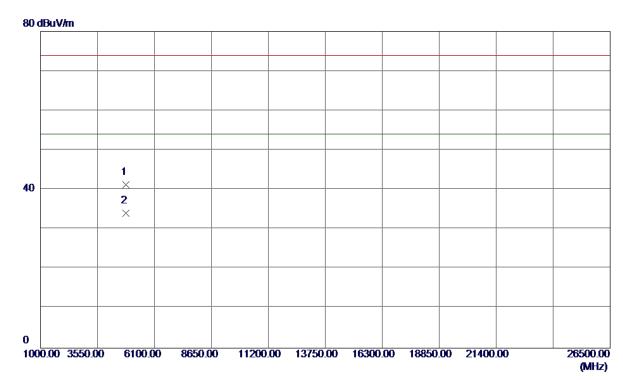
No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2375.0000	28. 02	34. 15	62. 17	74.00	-11.83	Peak	
2	2375.0000	18. 13	34. 15	52. 28	54.00	-1.72	AVG	
3	2390.0000	29. 07	34. 23	63. 30	74.00	-10.70	Peak	
4	2390.0000	16. 95	34. 23	51. 18	54.00	-2.82	AVG	
5	2406. 4000	76. 93	34. 33	111. 26	74.00	37. 26	Peak	No Limit
6	2408. 2000	64. 70	34. 34	99. 04	54.00	45. 04	AVG	No Limit

Report No.: BTL-FCCP-1-1507C072A Page 68 of 138



Test Mode: TX N-20M MODE 2412MHz

Vertical



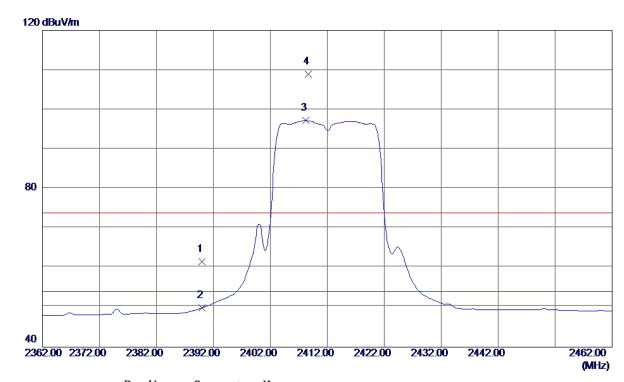
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4824. 1100	38. 26	3.00	41. 26	74.00	-32.74	Peak	
2	4824. 1589	31.09	3.00	34. 09	54.00	-19. 91	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 69 of 138



Test Mode: TX N-20M MODE 2412MHz

Horizontal



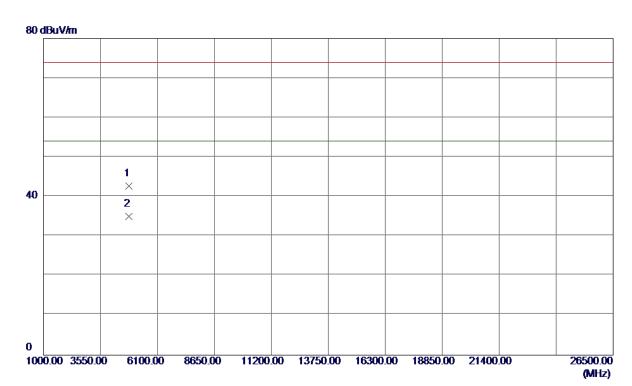
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	27. 35	34. 23	61.58	74.00	-12.42	Peak	
2	2390.0000	15. 68	34. 23	49. 91	54.00	-4.09	AVG	
3	2408. 2000	62. 94	34. 34	97. 28	54.00	43. 28	AVG	No Limit
4	2408.7000	74. 63	34. 34	108. 97	74.00	34.97	Peak	No Limit

Report No.: BTL-FCCP-1-1507C072A Page 70 of 138



Test Mode: TX N-20M MODE 2412MHz

Horizontal



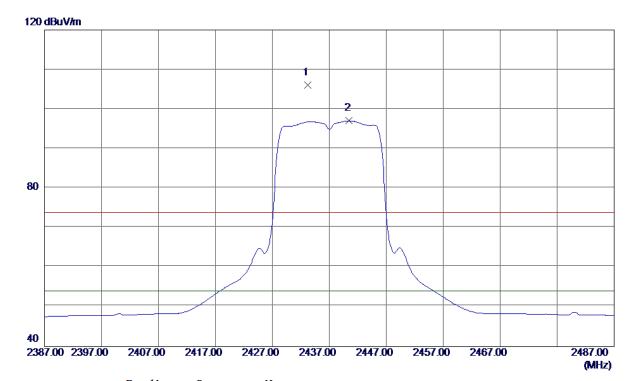
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4823.9750	39.66	3.00	42.66	74.00	-31. 34	Peak	
2	4824. 1200	32.06	3.00	35. 06	54.00	-18.94	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 71 of 138



Orthogonal Axis: X
Test Mode: TX N-20M MODE 2437MHz

Vertical



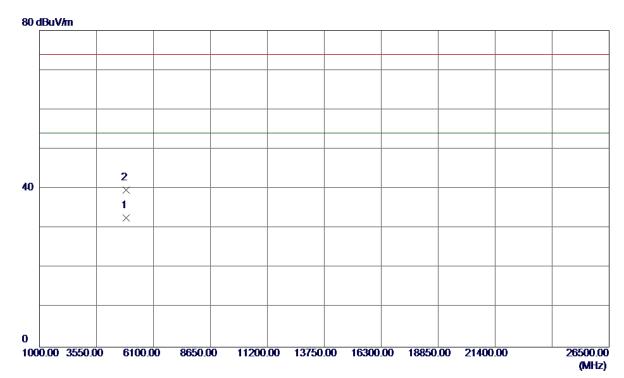
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2433. 2000	71.64	34.48	106. 12	74.00	32. 12	Peak	No Limit
2	2440. 5000	62. 52	34. 52	97.04	54.00	43.04	AVG	No Limit

Report No.: BTL-FCCP-1-1507C072A Page 72 of 138



Test Mode: TX N-20M MODE 2437MHz

Vertical



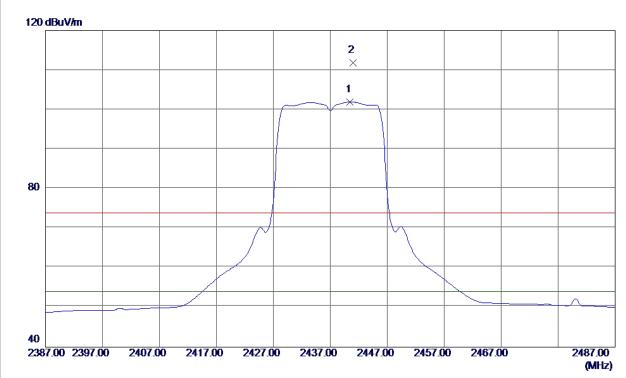
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874. 1070	29.67	3. 03	32.70	54.00	-21. 30	AVG	
2	4874. 3240	36. 58	3. 03	39. 61	74.00	-34. 39	Peak	

Report No.: BTL-FCCP-1-1507C072A Page 73 of 138



Test Mode: TX N-20M MODE 2437MHz

Horizontal



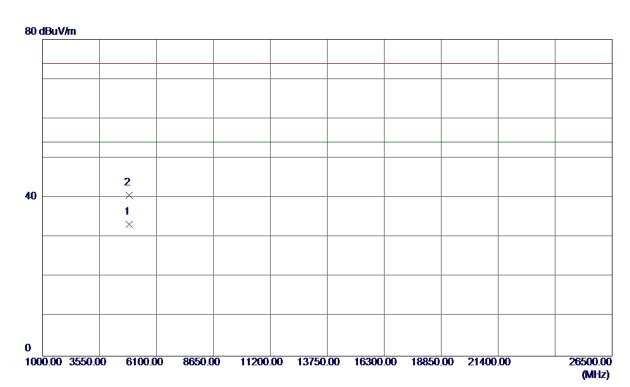
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2440. 5000	67.43	34. 52	101.95	54.00	47.95	AVG	No Limit
2	2441.0000	77. 28	34. 53	111.81	74.00	37.81	Peak	No Limit

Report No.: BTL-FCCP-1-1507C072A Page 74 of 138



Test Mode: TX N-20M MODE 2437MHz

Horizontal



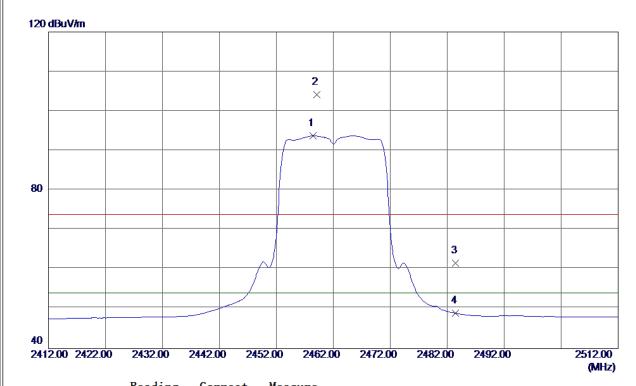
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874. 1530	30. 24	3. 03	33. 27	54.00	-20.73	AVG	
2	4874. 2570	37. 68	3. 03	40.71	74.00	-33. 29	Peak	

Report No.: BTL-FCCP-1-1507C072A Page 75 of 138



Orthogonal Axis: X
Test Mode: TX N-20M MODE 2462MHz

Vertical



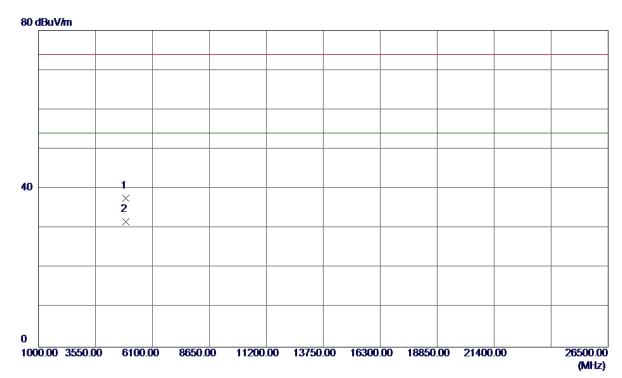
No.	Freq.	Keading Level	Factor	measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2458. 4000	59. 15	34.63	93. 78	54.00	39. 78	AVG	No Limit
2	2459. 1000	69. 57	34.63	104. 20	74.00	30. 20	Peak	No Limit
3	2483. 5000	26. 78	34.77	61. 55	74.00	-12.45	Peak	
4	2483. 5000	14. 18	34.77	48. 95	54.00	−5. 0 5	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 76 of 138



Test Mode: TX N-20M MODE 2462MHz

Vertical



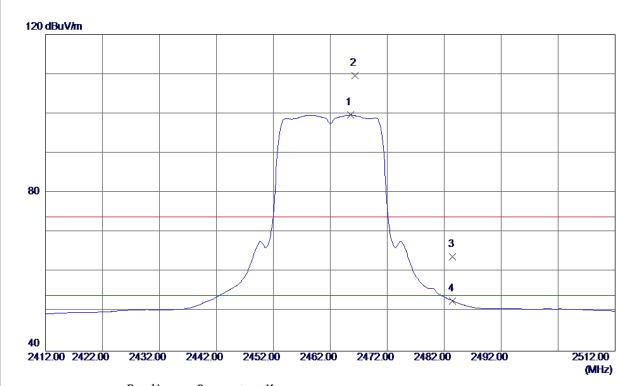
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4924. 0240	34.60	3.05	37.65	74.00	-36. 35	Peak	
2	4924. 1280	28. 70	3.05	31.75	54.00	-22. 25	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 77 of 138



Test Mode: TX N-20M MODE 2462MHz

Horizontal



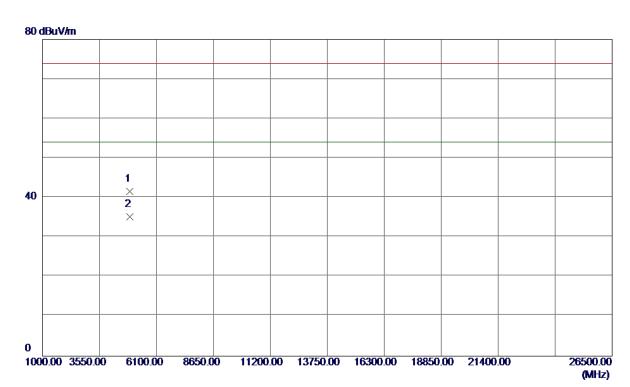
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2465.6000	64.94	34.67	99.61	54.00	45.61	AVG	No Limit
2	2466. 3000	74.87	34.67	109. 54	74.00	35. 54	Peak	No Limit
3	2483. 5000	29. 01	34.77	63. 78	74.00	-10. 22	Peak	
4	2483. 5000	17. 91	34.77	52. 68	54.00	-1. 32	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 78 of 138



Test Mode: TX N-20M MODE 2462MHz

Horizontal



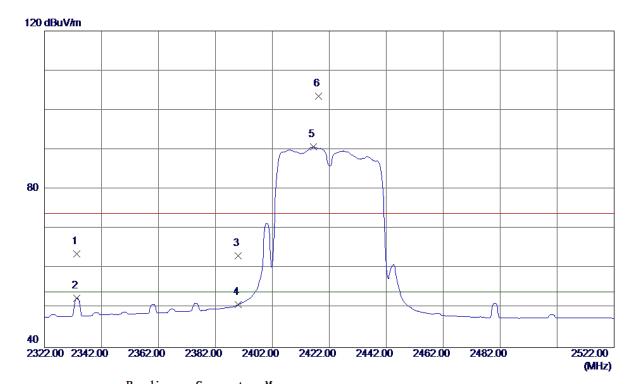
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4923. 9870	38. 57	3. 05	41.62	74.00	-32. 38	Peak	
2	4924. 0230	32. 15	3. 05	35. 20	54.00	-18.80	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 79 of 138



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

Vertical



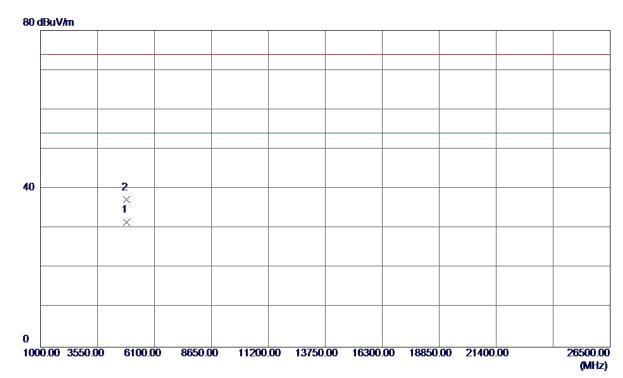
No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2333. 4000	29.71	33. 90	63. 61	74.00	-10.39	Peak	
2	2333. 4000	18. 58	33. 90	52. 48	54.00	-1.52	AVG	
3	2390.0000	28. 92	34. 23	63. 15	74.00	-10.85	Peak	
4	2390.0000	16. 62	34. 23	50.85	54.00	-3. 15	AVG	
5	2416. 4000	56. 31	34. 39	90.70	54.00	36. 70	AVG	No Limit
6	2418. 2000	69. 05	34. 40	103. 45	74.00	29. 45	Peak	No Limit

Report No.: BTL-FCCP-1-1507C072A Page 80 of 138



Test Mode: TX N-40M MODE 2422MHz

Vertical



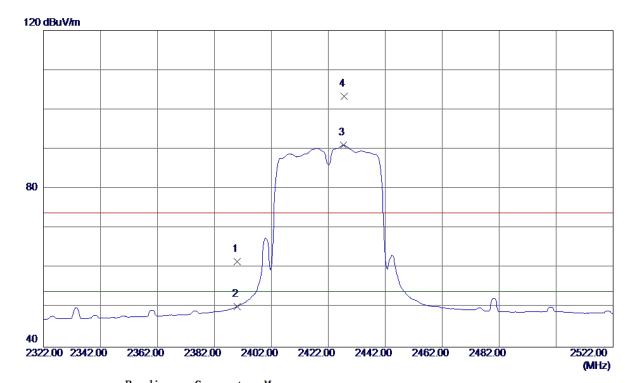
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4844.0890	28.46	3.01	31. 47	54.00	-22.53	AVG	
2	4844. 1260	34. 19	3. 01	37. 20	74.00	-36.80	Peak	

Report No.: BTL-FCCP-1-1507C072A Page 81 of 138



Test Mode: TX N-40M MODE 2422MHz

Horizontal



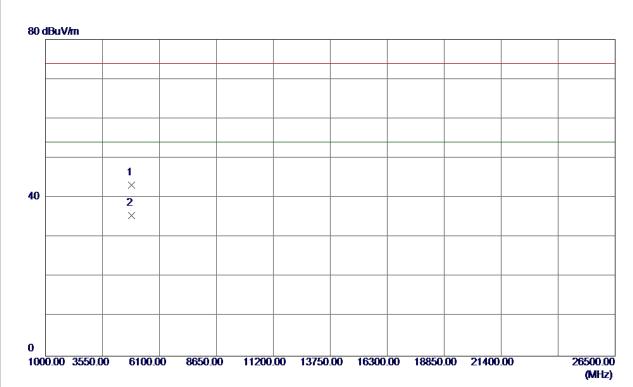
No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.0000	27.42	34. 23	61.65	74.00	-12. 35	Peak	
2	2390.0000	16. 02	34. 23	50. 25	54.00	-3.75	AVG	
3	2427.4000	56. 56	34.45	91.01	54.00	37.01	AVG	No Limit
4	2427.6000	68. 91	34. 45	103. 36	74.00	29. 36	Peak	No Limit

Report No.: BTL-FCCP-1-1507C072A Page 82 of 138



Test Mode: TX N-40M MODE 2422MHz

Horizontal



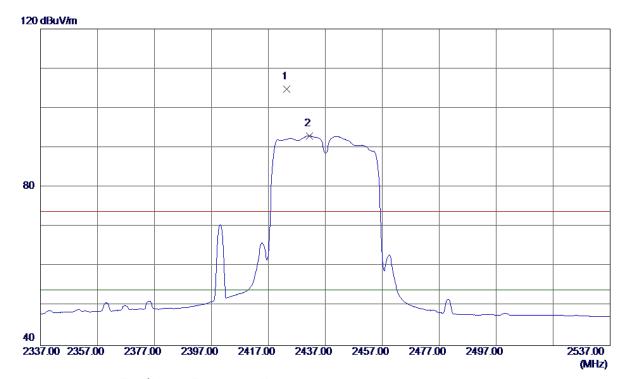
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4843.8750	40. 24	3.01	43. 25	74.00	-30.75	Peak	
2	4843.8750	32. 56	3. 01	35. 57	54.00	-18.43	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 83 of 138



Orthogonal Axis: X
Test Mode: TX N-40M MODE 2437MHz

Vertical



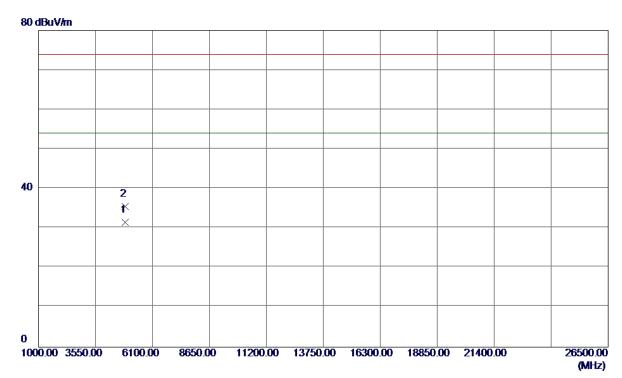
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2423.4000	70. 36	34.43	104.79	74.00	30. 79	Peak	No Limit
2	2431. 4000	58. 56	34. 47	93. 03	54.00	39. 03	AVG	No Limit

Report No.: BTL-FCCP-1-1507C072A Page 84 of 138



Test Mode: TX N-40M MODE 2437MHz

Vertical



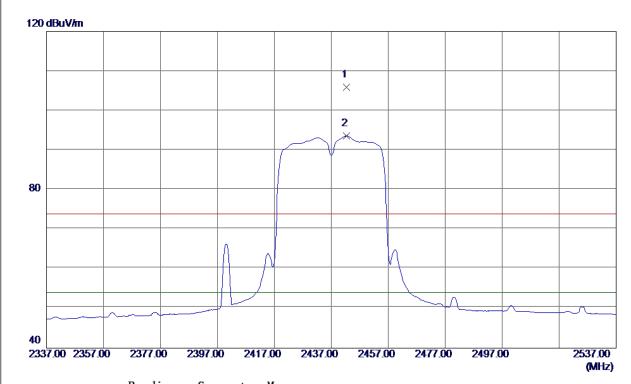
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4873.9780	28.46	3. 03	31. 49	54.00	-22.51	AVG	
2	4874. 1269	32. 52	3. 03	35. 55	74.00	-38.45	Peak	

Report No.: BTL-FCCP-1-1507C072A Page 85 of 138



Test Mode: TX N-40M MODE 2437MHz

Horizontal



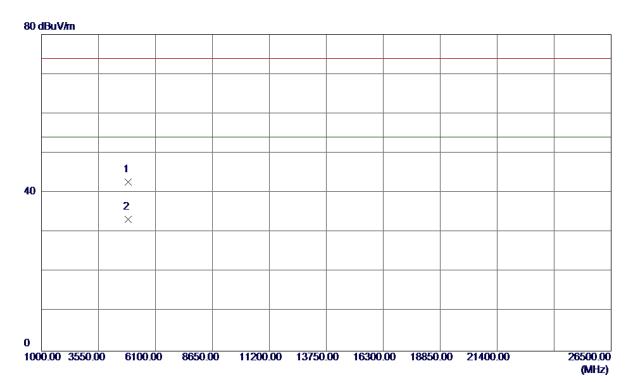
No.	Freq.	Keading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2442. 4000	71.41	34. 54	105. 95	74.00	31.95	Peak	No Limit
2	2442. 4000	59. 0 5	34. 54	93. 59	54.00	39. 59	AVG	No Limit

Report No.: BTL-FCCP-1-1507C072A Page 86 of 138



Test Mode: TX N-40M MODE 2437MHz

Horizontal



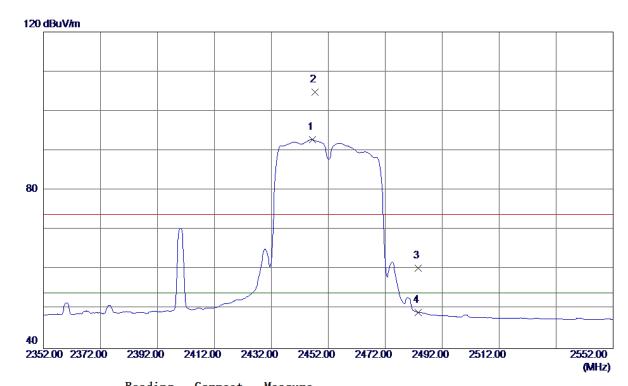
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874.0470	39.62	3. 03	42.65	74.00	-31. 35	Peak	
2	4874.0560	30. 25	3. 03	33. 28	54.00	-20.72	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 87 of 138



Orthogonal Axis: X
Test Mode: TX N-40M MODE 2452MHz

Vertical



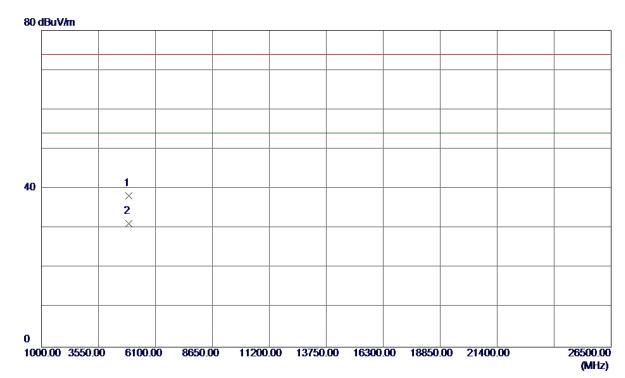
No.	Freq.	Keading Level	Factor	measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2446. 4000	58. 23	34. 56	92. 79	54.00	38. 79	AVG	No Limit
2	2447.4000	70. 23	34. 56	104.79	74.00	30. 79	Peak	No Limit
3	2483. 5000	25. 53	34.77	60. 30	74.00	-13.70	Peak	
4	2483. 5000	14. 40	34.77	49. 17	54.00	-4.83	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 88 of 138



Orthogonal Axis: X
Test Mode: TX N-40M MODE 2452MHz

Vertical



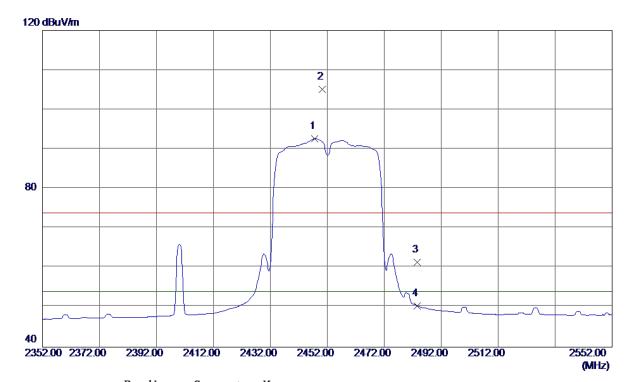
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4904. 1050	35. 24	3. 04	38. 28	74.00	-35.72	Peak	
2	4904. 1050	28. 15	3. 04	31. 19	54.00	-22.81	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 89 of 138



Test Mode: TX N-40M MODE 2452MHz

Horizontal



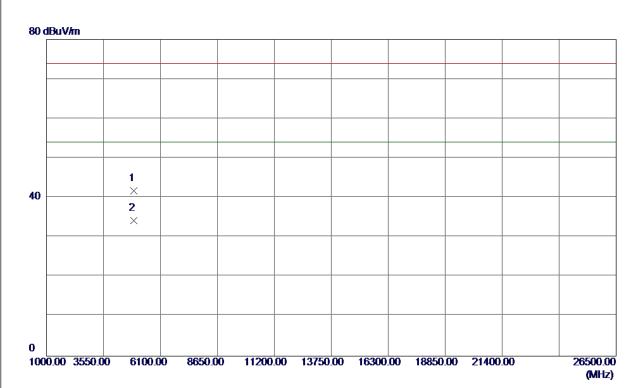
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2447.6000	58. 09	34. 57	92.66	54.00	38. 66	AVG	No Limit
2	2450. 2000	70. 52	34. 58	105. 10	74.00	31. 10	Peak	No Limit
3	2483. 5000	26. 60	34.77	61. 37	74.00	-12.63	Peak	
4	2483. 5000	15. 63	34.77	50. 40	54.00	-3.60	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 90 of 138



Test Mode: TX N-40M MODE 2452MHz

Horizontal



No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4904. 1020	38. 65	3. 04	41.69	74.00	-32. 31	Peak	
2	4904. 1050	31. 14	3. 04	34. 18	54.00	-19.82	AVG	

Report No.: BTL-FCCP-1-1507C072A Page 91 of 138



ATTACHMENT E - BANDWIDTH

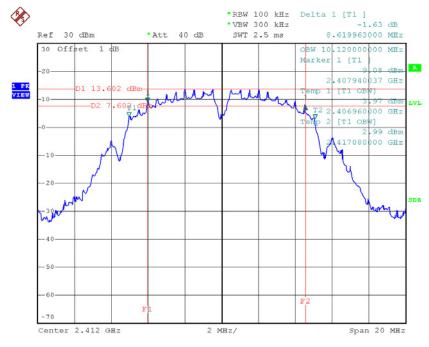
Report No.: BTL-FCCP-1-1507C072A Page 92 of 138



Test Mode: TX B Mode_CH01/06/11

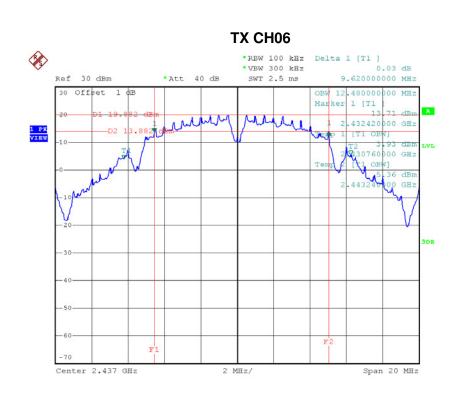
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	8.62	10.12	500	Complies
2437	9.62	12.48	500	Complies
2462	8.11	10.12	500	Complies

TX CH01

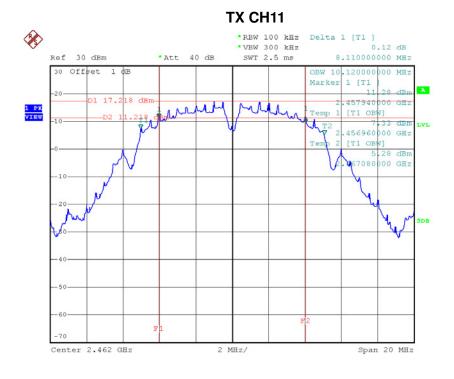


Date: 28.OCT.2015 08:44:48





Date: 28.0CT.2015 08:46:09



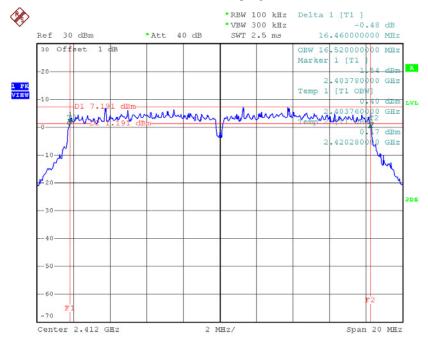
Date: 28.0CT.2015 08:47:37



Test Mode: TX G Mode_CH01/06/11

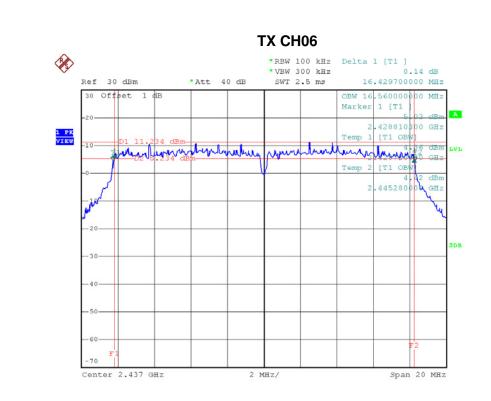
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	16.46	16.52	500	Complies
2437	16.43	16.56	500	Complies
2462	16.44	16.52	500	Complies

TX CH01

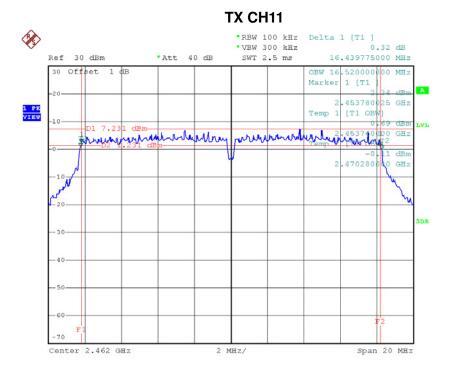


Date: 28.OCT.2015 08:48:50





Date: 28.OCT.2015 08:49:54



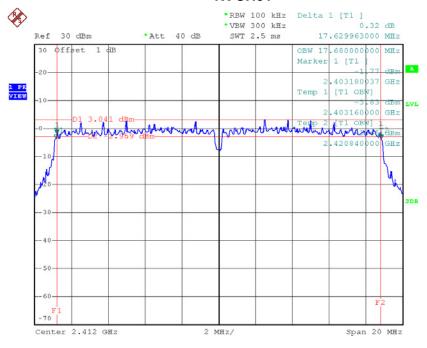
Date: 28.0CT.2015 08:51:00



Test Mode: TX N-20MHz Mode_CH01/06/11

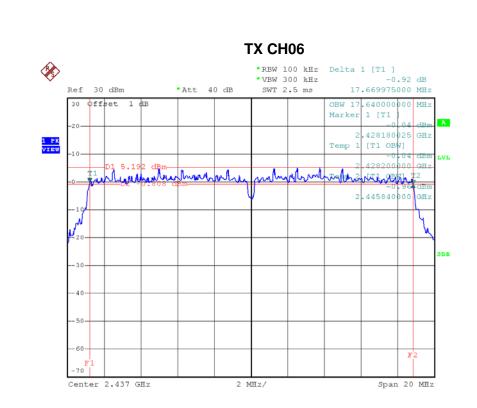
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	17.63	17.68	500	Complies
2437	17.67	17.64	500	Complies
2462	17.63	17.68	500	Complies

TX CH01

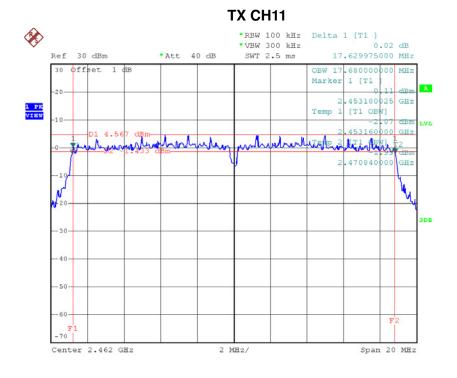


Date: 28.OCT.2015 08:52:17









Report No.: BTL-FCCP-1-1507C072A

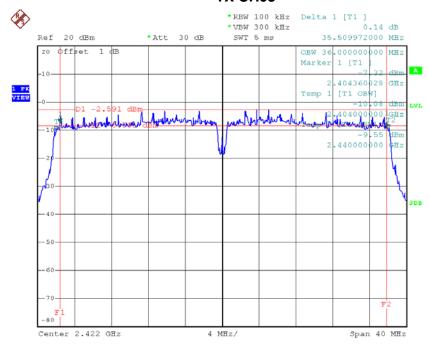
Date: 28.OCT.2015 08:54:34



Test Mode: TX N-40MHz Mode_CH03/06/09

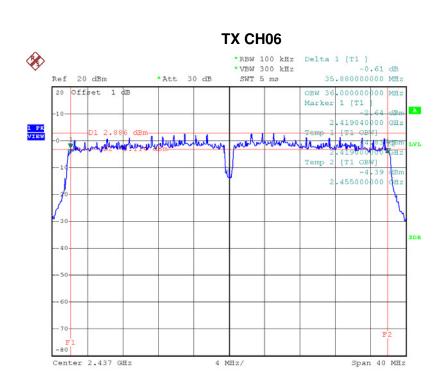
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2422	35.51	36	500	Complies
2437	35.88	36	500	Complies
2452	35.91	36	500	Complies

TX CH03



Date: 28.OCT.2015 09:02:14





Date: 28.0CT.2015 09:03:29

Date: 28.0CT.2015 09:04:51