



FCC Radio Test Report FCC ID: TE7EC440-G4U

This report concerns: Original Grant

Project No. : 1812C143

Equipment : AC2600 Wireless Dual Band Gigabit Router

Test Model : EC440-G4u

Series Model : N/A

Applicant : TP-Link Technologies Co., Ltd. Address : Building 24 (floors 1,3,4,5) and 28

> (floors1-4), Central Science and Technology Park, Nanshan Shenzhen, 518057 China

Date of Receipt : 2018/12/24

Date of Test : 2018/12/24 ~ 2019/4/18

Issued Date : 2019/6/17 : BTL Inc. Tested by

Testing Engineer

Technical Manager

Authorized Signatory:

BTL IN

No.18, Ln. 171, Sec. 2, Jiuzong Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.) FAX: +886-2-2657-3331

TEL: +886-2-2657-3299

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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.

The report must not be used by the client to claim product certification, approval, or endorsement by NIST, A2LA, or any agency of the U.S. Government.

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

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

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.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	2019/5/31
R01	Revised report to address TCB's comments.	2019/6/11
R02	Revised report to address TCB's comments.	2019/6/17

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CERTIFICATION

Equipment : AC2600 Wireless Dual Band Gigabit Router

Brand Name : tp-link Test Model : EC440-G4u

Series Model : N/A

Applicant : TP-Link Technologies Co., Ltd. Manufacturer : TP-Link Technologies Co., Ltd.

Address : Building 24 (floors 1,3,4,5) and 28 (floors1-4), Central Science and Technology

Park, Nanshan Shenzhen, 518057 China

Date of Test : 2018/12/24 ~ 2019/4/18 Test Sample : Engineering Sample

: FCC Part15, Subpart C (15.247) Standard(s)

ANSI C63.10-2013

The above equipment has been tested and found in 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-1-1812C143) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO/IEC 17025 quality assessment standard and technical standard(s).

Test results included in this report is only for the WLAN 2.4 GHz part.

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SUMMARY OF TEST RESULTS

Test procedures according to the technical standards.

FCC Part15, Subpart C (15.247)					
FCC Clause No	Test Result	Judgement	Remark		
15.207	AC Power Line Conducted Emissions	APPENDIX A	Pass		
15.205 15.209 15.247(d)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	Pass		
15.247(a)	Bandwidth	APPENDIX E	Pass		
15.247(b)	Conducted Peak Output Power	APPENDIX F	Pass		
15.247(d)	Antenna Conducted Spurious Emissions	APPENDIX G	Pass		
15.247(e)	Power Spectral Density	APPENDIX H	Pass		
15.203	Antenna Requirement		Pass		

NOTE:

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

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2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

(FCC RN:674415; FCC DN:TW0659) C05:

No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)

CB15: (VCCI RN: R-20020; FCC RN:674415; FCC DN:TW0659)

No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)

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 ± 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. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U (dB)
C05	CISPR	150 kHz ~ 30MHz	2.68	C05

B. Radiated emissions below 1 GHz test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U (dB)
		30 MHz ~ 200 MHz	V	4.20
CB15	CISPR	30 MHz ~ 200 MHz	Ι	3.64
(3m)	CISPR	200 MHz ~ 1,000 MHz	V	4.56
		200 MHz ~ 1,000 MHz	Н	3.90

C. Radiated emissions above 1 GHz test:

Test Site	Method	Measurement Frequency Range		U (dB)
		1 GHz ~ 6 GHz	V	4.46
CB15	CISPR	1 GHz ~ 6 GHz	Ι	4.40
(3m)	CISPR	6 GHz ~18 GHz	V	3.88
		6 GHz ~18 GHz	Η	4.00

Test Site	Method	Measurement Frequency Range	U (dB)
CB15	CISPR	18 GHz ~ 26.5 GHz	4.62
(1m)	CIOPK	26.5 GHz ~ 40 GHz	5.12

NOTE:

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

Our calculated Measurement Instrumentation Uncertainty is shown in the tables above. These are our U_{lab} values in CISPR 16-4-2 terminology.

Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called U_{CISPR}, as follows:

Conducted Disturbance (mains port) - 150 kHz - 30 MHz : 3.6 dB

Radiated Disturbance (electric field strength on an open area test site or alternative test site) - 30 MHz - 1000 MHz : 5.2 dB

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3 GENERAL INFORMATION

3.1 DESCRIPTION OF EUT

Equipment	AC2600 Wireless Dual Band Gigabit Router	
Brand Name	tp-link	
Test Model	EC440-G4u	
Series Model	N/A	
Model Difference	N/A	
Power Source	DC Voltage supplied from AC/DC adapter.	
Dower Beting	I/P: 100-240V~50/60Hz, 1.5A	
Power Rating	O/P: 12.0V==3300mA	
Operation Frequency	2412 MHz to 2462 MHz	
	IEEE 802.11b: DSSS	
Modulation Type	IEEE 802.11g: OFDM	
lvioddiation Type	IEEE 802.11n: OFDM	
	IEEE VHT: 1024-QAM	
	IEEE 802.11b: 11/5.5/2/1 Mbps	
Bit Rate of Transmitter	IEEE 802.11g: 54/48/36/24/18/12/9/6 Mbps	
Trace of Transmitter	IEEE 802.11n: up to 600 Mbps	
	IEEE VHT: up to 800 Mbps	
	IEEE 802.11b: 29.01 dBm (0.7962 W)	
	IEEE 802.11g: 29.59 dBm (0.9106 W)	
Maximum Output Power	IEEE 802.11n (HT20): 29.70 dBm (0.9339 W)	
Maximum Catpat i Ower	IEEE 802.11n (HT40): 26.34 dBm (0.4304 W)	
	IEEE VHT (VHT20): 29.65 dBm (0.9230 W)	
	IEEE VHT (VHT40): 26.28 dBm (0.4250 W)	
Product Covered	1 * Adapter: SO48CU1200330	

NOTE:

(1) For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

(2) Channel List:

(2) Charlier List.						
CH01 - CH11 for IEEE 802.11b/g/n (HT20)/VHT (VHT20) CH03 - CH09 for IEEE 802.11n (HT40)/VHT (VHT40)						
Channel Frequency (MHz) Frequency (MHz) Frequency (MHz)						
01	2412	05	2432	09	2452	
02	2417	06	2437	10	2457	
03	2422	07	2442	11	2462	
04	2427	08	2447			

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(3) Table for Filed Antenna:

Ant.	Brand	Model	Type	Connector	Gain (dBi)
1	TP-Link	3101502192	PCB	I-PEX	3.77
2	TP-Link	3101502193	PCB	I-PEX	5.00
3	TP-Link	3101502194	PCB	I-PEX	4.49
4	TP-Link	3101502195	PCB	I-PEX	5.65

NOTE:

- (a) The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (4T4R). 2.4 GHz and 5GHz can transmit simultaneously.
- (b) For Power Spectral Density (CDD mode) Directional Gain = $10\log [(10^{G1/20} + 10^{G2/20} + ... + 10^{Gn/20})^2/N_{ANT}] = 10.78$ dBi. The Direction gain exceeds 6 dBi, so the reduced power spectral density limits = Limit - (Directional Gain - 6 dBi) = 8 - (10.78 - 6) = 3.22 dBm/MHz.
- (c) For Conducted Peak Output Power (CDD mode) For $N_{ANT} = 4 < 5$,
 - Direction gain = $G_{ANT} + 0 = 5.65 + 0 = 5.65 \text{ dBi}$.
 - The Direction gain is less than 6 dBi, so conducted power limits will not be reduced.
- (d) The WLAN 2.4 GHz does not support beamforming function.

(4) Operating Mode and Antenna Configuration

<u> </u>	0	
Operating Mode	1 TX	4 TX
IEEE 802.11b	Ant. 1	-
IEEE 802.11g	•	Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4
IEEE 802.11n (HT20)	-	Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4
IEEE 802.11n (HT40)	-	Ant. 1 + Ant. 2 + Ant. 3 + Ant. 4

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3.2 TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

Pretest Mode	Description			
1	TX B MODE CHANNEL 01/02/06/10/11			
2	TX G MODE CHANNEL 01/02/06/10/11			
3	TX N (HT20) MODE CHANNEL 01/02/06/10/11			
4	TX N (HT40) MODE CHANNEL 03/04/06/08/09			
5	TX VHT (VHT20) MODE CHANNEL 01/02/06/10/11			
6	TX VHT (VHT40) MODE CHANNEL 03/04/06/08/09			

Following mode(s) as (were) found to be the worst case(s) and selected for the final test.

AC power line conducted emissions test					
Test Mode	Test Mode Description				
4	TX N (HT40) MODE CHANNEL 03				

Radiated emissions test				
Test Mode	Description			
1	TX B MODE CHANNEL 01/02/06/10/11			
2	G MODE CHANNEL 01/02/06/10/11			
3	TX N (HT20) MODE CHANNEL 01/02/06/10/11			
4	TX N (HT40) MODE CHANNEL 03/04/06/08/09			

Conducted test				
Test Mode Description				
1	TX B MODE CHANNEL 01/06/11			
2	X G MODE CHANNEL 01/06/11			
3	X N (HT20) MODE CHANNEL 01/06/11			
4	TX N (HT40) MODE CHANNEL 03/06/09			

- (1) The measurements are performed at the low, middle and high available channels.
- (2) Test Data Rate

IEEE 802.11b: DBPSK (1 Mbps)

IEEE 802.11g: OFDM (6 Mbps)

IEEE 802.11n (HT20): BPSK (6.5 Mbps)

IEEE 802.11n (HT40): BPSK (13.5 Mbps)

IEEE VHT (VHT20): BPSK (6.5 Mbps)

IEEE VHT (VHT40): BPSK (13.5 Mbps)

- (3) For radiated emission tests, the highest output powers were set for final test.
- (4) For radiated emission below 1 GHz test, the IEEE 802.11b was found to be the worst case and recorded.
- (5) HT20 and HT40 modes cover VHT20 and VHT40 modes, due to same modulation and the power setting for VHT20 and VHT40 modes is the same or lower than HT20 and HT40 modes.

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3.3 PARAMETERS OF TEST SOFTWARE

Test Software	Lantiq DUT Link		
Mode	2412 MHz	2437 MHz	2462 MHz
IEEE 802.11b	28	31.5	26
IEEE 802.11g	18	23.5	19
IEEE 802.11n (HT20)	18	23.5	19
IEEE VHT (VHT20)	18	23.5	19
Mode	2422 MHz	2437 MHz	2452 MHz
IEEE 802.11n (HT40)	15	19.5	17
IEEE VHT (VHT40)	15	19.5	17

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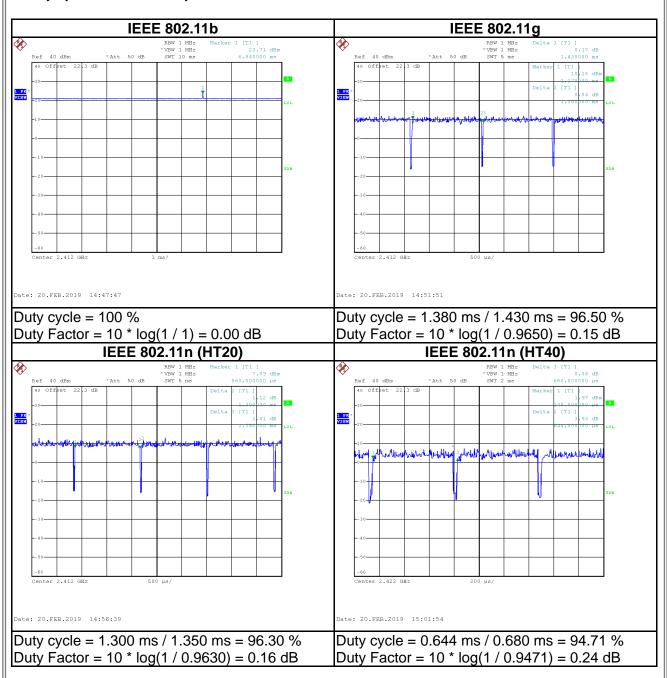
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3.4 DUTY CYCLE

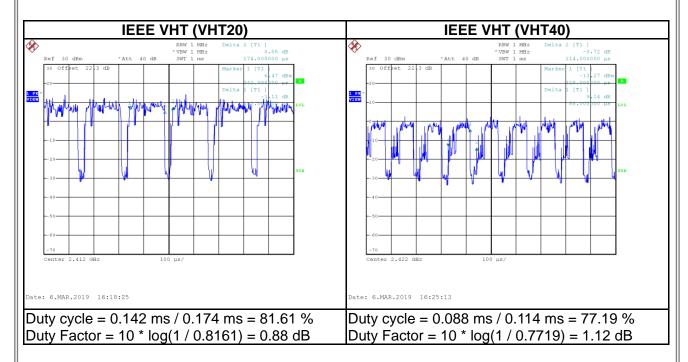
If duty cycle is \geq 98 %, duty factor is not required. If duty cycle is < 98 %, duty factor shall be considered.



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NOTE:

For IEEE 802.11g, IEEE 802.11n (HT20) and IEEE VHT (VHT20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1 kHz (Duty cycle < 98%).

For IEEE 802.11n (HT40) and IEEE VHT (VHT20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 2 kHz (Duty cycle < 98%).

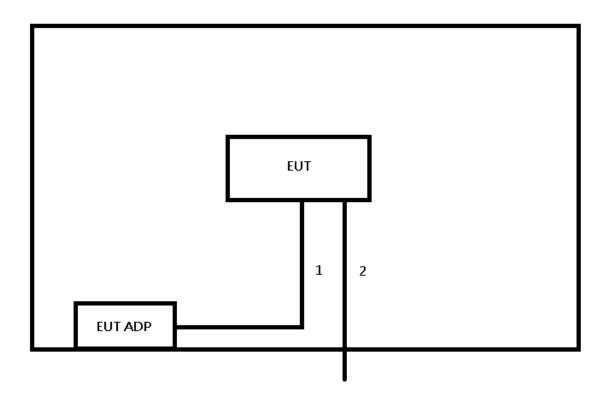
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3.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Equipment letters and Cable numbers refer to item numbers described in the tables of clause 3.6.



3.6 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
-	-	-	-	-

Item	Cable Type	Shielded	Ferrite Core	Length
1	Power cable	NO	NO	1.2m
2	LAN Cable	NO	NO	5m

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AC POWER LINE CONDUCTED EMISSIONS TEST

4.1 LIMIT

Frequency (MHz)	Quasi-peak (dBµV)	Average (dBµV)
0.15 - 0.5	66 - 56 *	56 - 46 *
0.50 - 5.0	56	46
5.0 - 30.0	60	50

NOTE:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
- (3) 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

Sample calculations: (Refer to page 34, test result No.1.)

Reading Level		Correct Factor		Measurement Value
40.80	+	9.66	=	50.46

Measurement Value		Limit Value		Margin Level
50.46	-	65.88	=	-15.42

The following table is the setting of the receiver.

The following date to detail of the foodbon.					
Receiver Parameter	Setting				
Attenuation	10 dB				
Start Frequency	0.15 MHz				
Stop Frequency	30 MHz				
IF Bandwidth	9 KHz				

4.2 TEST PROCEDURE

- a. The EUT was placed 0.8 m above the horizontal ground plane with the EUT being connected to the power mains through a line impedance stabilization network (LISN).
 - All other support equipment were powered from an additional LISN(s).
 - The LISN provides 50 Ohm/50uH of 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 to keep the cable above 40 cm.
- c. Excess I/O cables that are not connected to a peripheral shall be bundled in the center.
 - The end of the cable will be terminated, using the correct terminating impedance.
 - The overall length shall not exceed 1 m.
- d. The LISN is spaced at least 80 cm from the nearest part of the EUT chassis.
- e. For the actual test configuration, please refer to the related Item EUT TEST PHOTO.

4.3 DEVIATION FROM TEST STANDARD

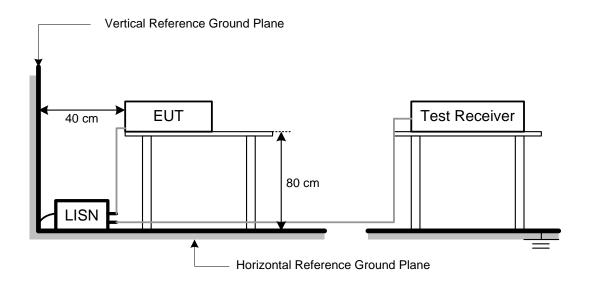
No deviation.

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4.4 TEST SETUP



4.5 EUT OPERATING CONDITIONS

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

4.6 TEST RESULT

Temperature: 25 °C Relative Humidity: 45 % Test Voltage: AC 120V/50Hz

Please refer to the APPENDIX A.

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RADIATED EMISSIONS TEST

5.1 LIMIT

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

LIMITS OF RADIATED EMISSIONS MEASUREMENT (9 kHz to 1000 MHz)

Elimination of the living of t						
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 EMISSIONS MEASUREMENT (Above 1000 MHz)

Frequency (MHz)	Radiated (dBu	Emissions V/m)	Measurement Distance
(IVITZ)	Peak	Average	(meters)
Above 1000	74	54	3

NOTE:

- (1) The limit for radiated test was performed according to FCC Part 15, Subpart C.
- (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

Sample calculations: (Refer to page 37, test result No.1.)

Reading Level		Correct Factor		Measurement Value
17.11	+	15.51	=	32.62

Measurement Value		Limit Value		Margin Level
32.62	-	106.85	=	-74.23

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

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

5.2 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 1.5 m; 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.
- 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)
- For the actual test configuration, please refer to the related Item EUT TEST PHOTO.

5.3 DEVIATION FROM TEST STANDARD

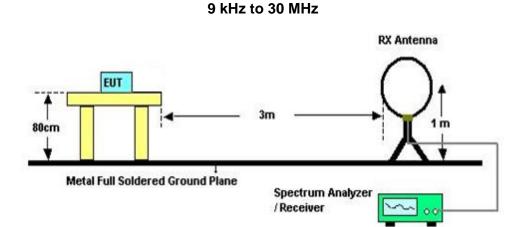
No deviation.

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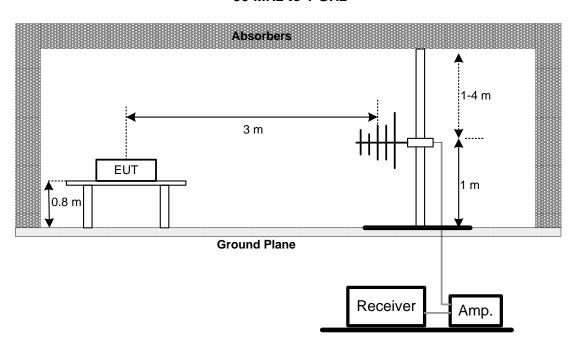




5.4 TEST SETUP



30 MHz to 1 GHz



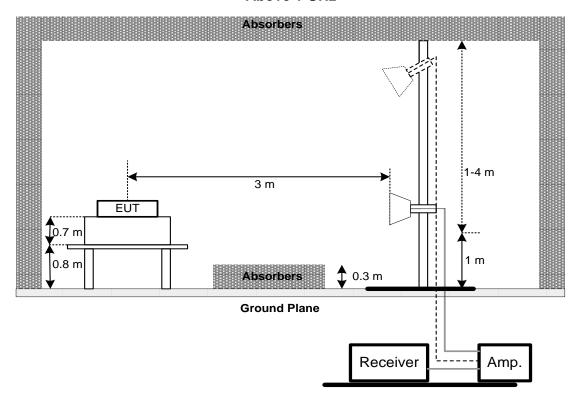
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Above 1 GHz



5.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULT - 9 KHZ TO 30 MHZ

Temperature: 23 °C Relative Humidity: 70 % Test Voltage: AC 120V/50Hz

Please refer to the APPENDIX B.

REMARK:

- (1) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
- (2) Limit line = specific limits (dBuV) + distance extrapolation factor.

5.7 TEST RESULT - 30MHZ TO 1000 MHZ

Temperature: 23 °C Relative Humidity: 70 % Test Voltage: AC 120V/50Hz

Please refer to the APPENDIX C.

5.8 TEST RESULT - ABOVE 1000 MHZ

Temperature: 23 °C Relative Humidity: 70 % Test Voltage: AC 120V/50Hz

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.

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BANDWIDTH TEST

6.1 LIMIT

FCC Part15, Subpart C (15.247)				
Section Test Item Limit				
15.247(a) 6 dB Bandwidth Minimum 5				

6.2 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 = 100 kHz, VBW = 300 kHz, Sweep time = 2.5 ms.
- c. The bandwidth was performed in accordance with method 11.8 of ANSI C63.10-2013.

6.3 DEVIATION FROM TEST STANDARD

No deviation.

6.4 TEST SETUP

EUT	SPECTRUM	
	ANALYZER	

6.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULT

Please refer to the APPENDIX E.

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7 CONDUCTED OUTPUT POWER TEST

7.1 LIMIT

FCC Part15, Subpart C (15.247)					
Section Test Item Limit					
15.247(b)	Maximum Conducted Peak Output Power	1 Watt or 30dBm			

7.2 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 conducted output power was performed in accordance with method 11.9.2.3 of ANSI C63.10-2013.

7.3 DEVIATION FROM TEST STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULT

Please refer to the APPENDIX F.

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ANTENNA CONDUCTED SPURIOUS EMISSIONS TEST

8.1 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.

If the transmitter complies with the Output Power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

8.2 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 = 100 kHz, VBW=300 kHz, Sweep time = Auto.

8.3 DEVIATION FROM TEST STANDARD

No deviation.

8.4 TEST SETUP

EUT	SPECTRUM	
	ANALYZER	

8.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULT

Please refer to the APPENDIX G.

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POWER SPECTRAL DENSITY

9.1 LIMIT

FCC Part15, Subpart C (15.247)					
Section Test Item Limit					
15.247(e)					

9.2 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 = 3 kHz, VBW = 10 kHz, Sweep time = Auto.
- c. The Power Spectral Density was performed in accordance with method 11.10.2 of ANSI C63.10-2013.

9.3 DEVIATION FROM TEST STANDARD

No deviation.

9.4 TEST SETUP

EUT	SPECTRUM	
	ANALYZER	

9.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

9.6 TEST RESULT

Please refer to the APPENDIX H.

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10 LIST OF MEASURING EQUIPMENTS

	AC Power Line Conducted Emissions							
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until			
1	TWO-LINE V-NETWORK	R&S	ENV216	101050	2019/3/18 2020/3/1			
2	Test Cable	EMCI	EMCCFD300-BM -BMR-6000	170715	2019/8/7			
3	EMI Test Receiver	R&S	ESR7	101433	2019/12/4			
4	Measurement Software	EZ	EZ_EMC (Version NB-03A)	N/A	N/A			

		Rad	iated Emissions		
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Preamplifier	EMCI	012645B	980267	2019/4/15 2020/4/3
2	Preamplifier	EMCI	EMC02325	980217	2019/4/15 2020/4/3
3	Preamplifier	EMCI	EMC2654045	980030	2019/4/15 2020/4/3
4	Test Cable EMCI		EMC104-SM-SM- 8000	8m	2019/4/15 2020/4/3
5	Test Cable	EMCI	EMC104-SM-SM- 800	150207	2019/4/15 2020/4/3
6	Test Cable	Test Cable EMCI		151205	2019/4/15 2020/4/3
7	MXE EMI Receiver Agilent		N9038A	MY55420127	2019/3/26 2020/3/15
8	Signal Analyzer Agilent		N9010A	MY52220990	2019/5/22
9	Loop Ant	EMCO	6502	42960	2019/5/3
10	SCHWAR7BEC		BBHA 9120D	9120D-1342	2019/5/2
11	Horm Ant	Schwarzbeck	BBHA 9170	187	2019/8/16
12	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	9168-548	2019/3/22 2020/3/10
13	5dB Attenuator	EMCI	EMCI-N-6-05	AT-N0623	2019/3/22 2020/3/10

	Bandwidth										
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until						
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	2019/5/27						

	Conducted Peak Output Power										
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until						
1	Power Meter	Anritsu	ML2495A	1128008	2019/12/5						
2	Power Sensor	Anritsu	MA2411B	1126001	2019/12/5						

Antenna Conducted Spurious Emissions										
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until					
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	2019/5/27					

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	Power Spectral Density									
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until					
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	2019/5/27					

Remark: "N/A" denotes no model name, no serial no. or no calibration specified. All calibration period of equipment list is one year.

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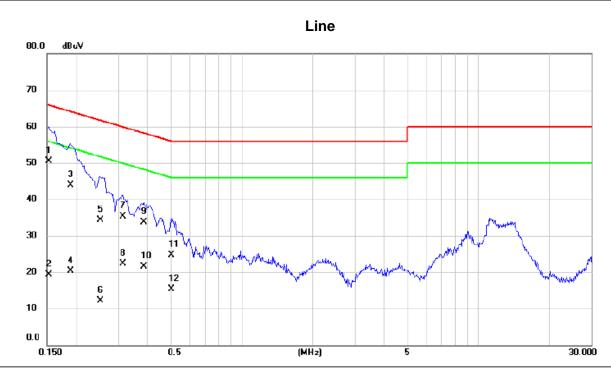
APPENDIX A	AC POWER LINE CONDUCTED EMISSIONS

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Test Mode TX N (HT40) MODE CHANNEL 03



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1522	40.80	9.66	50.46	65.88	-15.42	QP	
2		0.1522	9.70	9.66	19.36	55.88	-36.52	AVG	
3		0.1883	34.30	9.66	43.96	64.11	-20.15	QP	
4		0.1883	10.60	9.66	20.26	54.11	-33.85	AVG	
5		0.2513	24.70	9.66	34.36	61.71	-27.35	QP	
6		0.2513	2.40	9.66	12.06	51.71	-39.65	AVG	
7		0.3141	25.60	9.65	35.25	59.86	-24.61	QP	
8		0.3141	12.70	9.65	22.35	49.86	-27.51	AVG	
9		0.3840	24.00	9.65	33.65	58.19	-24.54	QP	
10		0.3840	11.80	9.65	21.45	48.19	-26.74	AVG	
11		0.5032	15.10	9.65	24.75	56.00	-31.25	QP	
12		0.5032	5.60	9.65	15.25	46.00	-30.75	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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Test Mode TX N (HT40) MODE CHANNEL 03

Neutral 80.0 dBu∀ 70 60 50 40 30 X 12 X 20 6 X 10 0.0 0.150 0.5 (MHz) 30.000

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1522	41.90	9.65	51.55	65.88	-14.33	QP	
2		0.1522	13.20	9.65	22.85	55.88	-33.03	AVG	
3		0.1883	32.70	9.64	42.34	64.11	-21.77	QP	
4		0.1883	11.50	9.64	21.14	54.11	-32.97	AVG	
5		0.2535	26.10	9.64	35.74	61.64	-25.90	QP	
6		0.2535	3.70	9.64	13.34	51.64	-38.30	AVG	
7		0.3165	23.90	9.64	33.54	59.80	-26.26	QP	
8		0.3165	8.30	9.64	17.94	49.80	-31.86	AVG	
9		0.3682	20.30	9.64	29.94	58.54	-28.60	QP	
10		0.3682	6.30	9.64	15.94	48.54	-32.60	AVG	
11		11.0580	18.70	9.92	28.62	60.00	-31.38	QP	
12		11.0580	13.10	9.92	23.02	50.00	-26.98	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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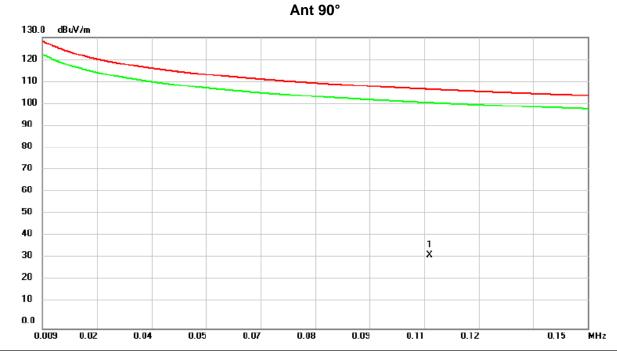
ADDENIDIY D	RADIATED EMISSIONS - 9 KHZ TO 30 MHZ
APPENDIX D	RADIATED EINISSIONS - 9 KHZ TO 30 MHZ

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-	No.	Mk.	Freq.		Correct Factor	Measure- ment		Over			
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment	
-	1	*	0.1091	17.11	15.51	32.62	106.85	-74.23	QP		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

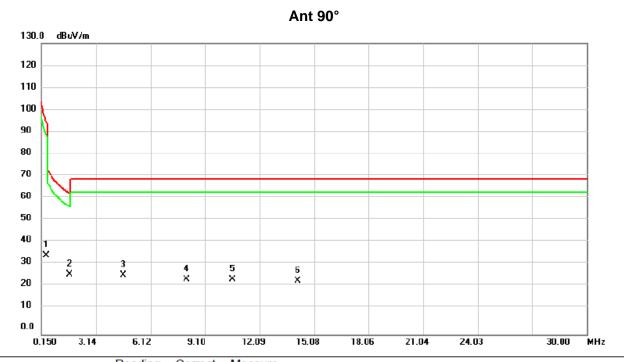
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Test Mode TX B MODE CHANNEL 11



	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		0.3888	30.12	5.10	35.22	95.81	-60.59	AVG	
	2	*	1.6624	29.04	-2.07	26.97	63.19	-36.22	QP	
	3		4.6076	30.48	-3.88	26.60	69.54	-42.94	QP	
	4		8.0702	29.00	-4.34	24.66	69.54	-44.88	QP	
	5		10.5776	29.21	-4.77	24.44	69.54	-45.10	QP	
	6		14.1596	28.78	-4.85	23.93	69.54	-45.61	QP	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

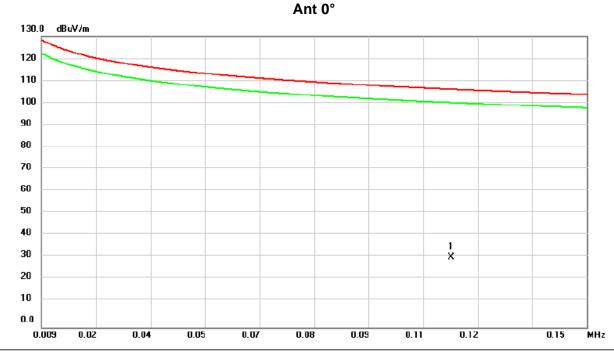
Report No.: BTL-FCCP-1-1812C143

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No. Mk.	Freq.	Reading Level		Measure- ment	Limit	Over			
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment	
1 *	0.1150	16 24	15 10	31.42	106.20	74.07	AVC		

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

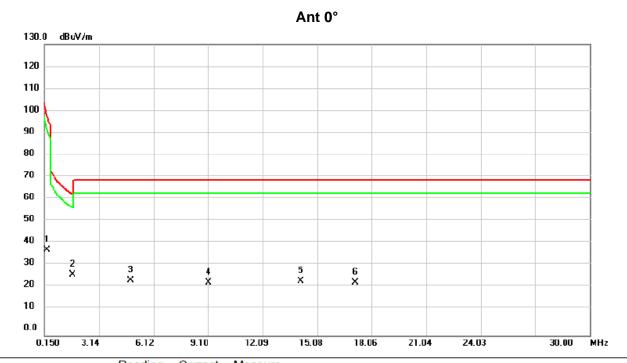
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Test Mode TX B MODE CHANNEL 11



	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		0.2694	30.02	8.03	38.05	99.00	-60.95	AVG	
	2	*	1.6624	29.18	-2.07	27.11	63.19	-36.08	QP	
_	3		4.8464	28.44	-3.90	24.54	69.54	-45.00	QP	
	4		9.1050	28.14	-4.71	23.43	69.54	-46.11	QP	
	5		14.1596	29.02	-4.85	24.17	69.54	-45.37	QP	
	6		17.1446	29.37	-5.89	23.48	69.54	-46.06	QP	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

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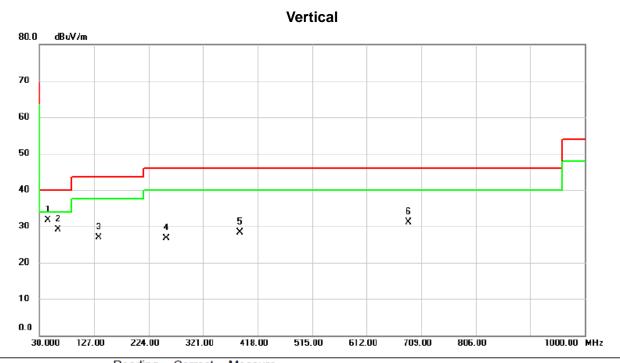
APPENDIX C	RADIATED EMISSIONS - 30 MHZ TO 1000 MHZ

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	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
-	1	*	44.5500	40.00	-8.25	31.75	40.00	-8.25	QP	
-	2		62.9800	38.48	-9.30	29.18	40.00	-10.82	QP	
-	3	1	135.7300	36.23	-9.28	26.95	43.50	-16.55	QP	
-	4	2	255.0400	35.60	-8.91	26.69	46.00	-19.31	QP	
-	5	3	385.9900	33.71	-5.39	28.32	46.00	-17.68	QP	
-	6	6	86.6900	30.18	0.98	31.16	46.00	-14.84	QP	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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Horizontal 80.0 dBuV/m 70 60 50 40 30 20 10 0.0 1000.00 MHz 30.000 127.00 224.00 321.00 418.00 515.00 612.00 709.00 806.00

	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
-	1		130.8800	38.00	-9.81	28.19	43.50	-15.31	QP	
-	2		197.8100	36.74	-10.89	25.85	43.50	-17.65	QP	
-	3		255.0400	34.52	-8.91	25.61	46.00	-20.39	QP	
-	4		508.2100	29.88	-2.77	27.11	46.00	-18.89	QP	
-	5		749.7400	29.33	2.31	31.64	46.00	-14.36	QP	
-	6	*	944.7100	28.24	5.72	33.96	46.00	-12.04	QP	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

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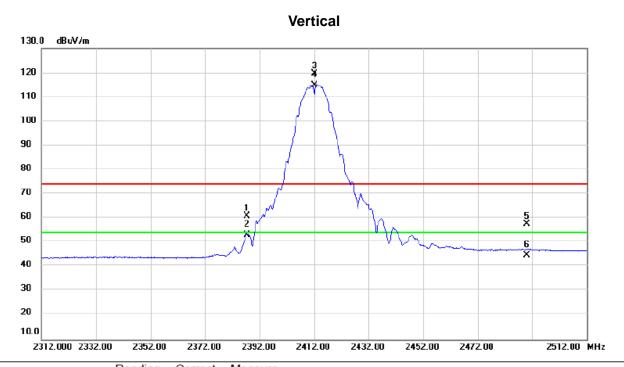
APPENDIX D	RADIATED EMISSIONS - ABOVE 1000 MHZ

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	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1		2387.348	30.14	30.86	61.00	74.00	-13.00	peak	
_	2		2387.348	22.16	30.86	53.02	54.00	-0.98	AVG	
_	3	Χ	2412.000	88.77	30.94	119.71	74.00	45.71	peak	No Limit
_	4	*	2412.000	83.94	30.94	114.88	54.00	60.88	AVG	No Limit
_	5		2490.017	26.39	31.19	57.58	74.00	-16.42	peak	
-	6		2490.017	13.58	31.19	44.77	54.00	-9.23	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

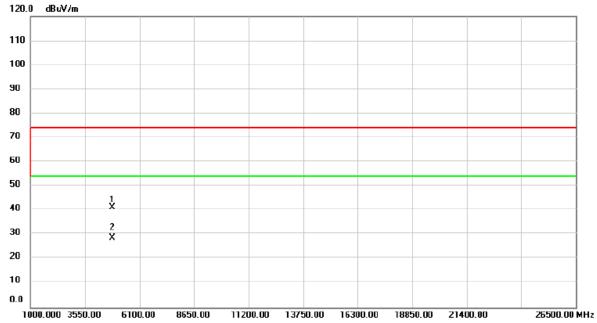
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No.	MI	k. Freq.			Measure- ment		Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.000	52.75	-11.58	41.17	74.00	-32.83	peak	
2	*	4824.000	40.34	-11.58	28.76	54.00	-25.24	AVG	

REMARKS:

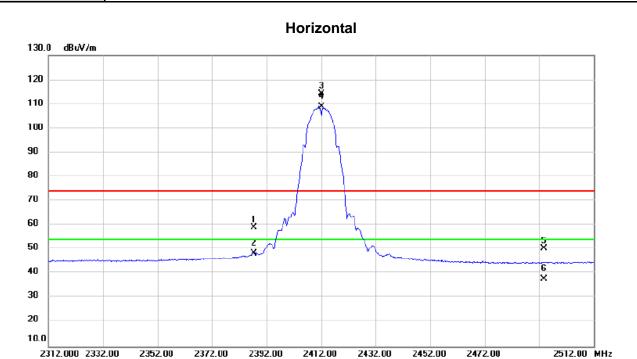
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

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No) .	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
•	1		2387.348	28.10	30.86	58.96	74.00	-15.04	peak	
2	2		2387.348	17.28	30.86	48.14	54.00	-5.86	AVG	
- 3	3	X	2412.000	83.37	30.94	114.31	74.00	40.31	peak	No Limit
	4	*	2412.000	78.04	30.94	108.98	54.00	54.98	AVG	No Limit
	5		2493.680	19.09	31.21	50.30	74.00	-23.70	peak	
(3		2493.680	6.67	31.21	37.88	54.00	-16.12	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

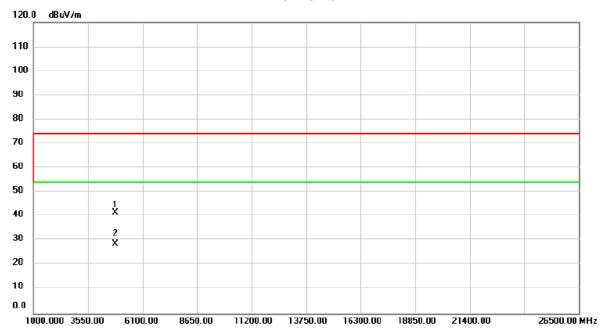
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Horizontal



_	No.	M	k.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
_				MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1		482	24.000	53.10	-11.58	41.52	74.00	-32.48	peak	
Ī	2	*	482	24.000	40.35	-11.58	28.77	54.00	-25.23	AVG	

REMARKS:

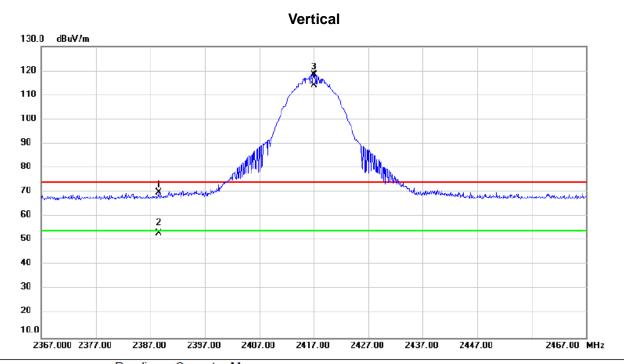
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		2388.500	38.91	30.86	69.77	74.00	-4.23	peak	
	2		2388.500	22.18	30.86	53.04	54.00	-0.96	AVG	
	3	X	2417.000	87.57	30.95	118.52	74.00	44.52	peak	No Limit
	4	*	2417.000	82.96	30.95	113.91	54.00	59.91	AVG	No Limit

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

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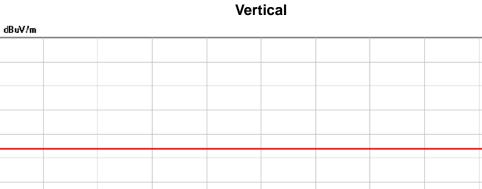


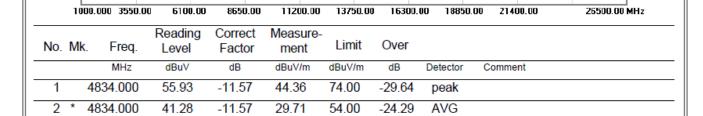
120.0



Test Mode TX B MODE CHANNEL 02

X





REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

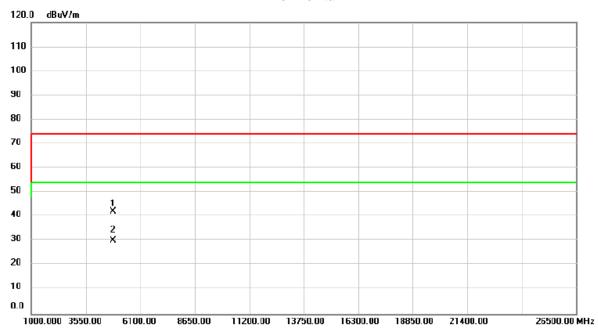
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	No.	M	k. Freq.		Correct Factor	Measure- ment		Over		
_			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1		4834.000	53.63	-11.57	42.06	74.00	-31.94	peak	
	2	*	4834.000	41.68	-11.57	30.11	54.00	-23.89	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

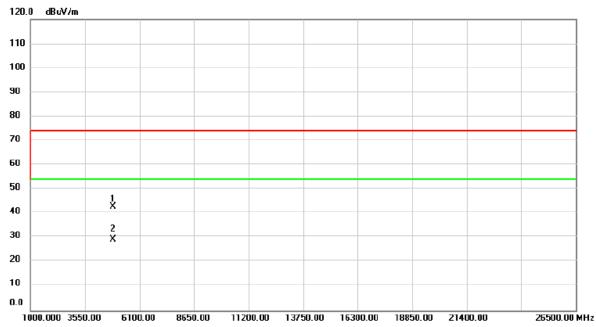
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No.	MI	k.	Freq.			Measure- ment		Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		48	74.000	54.39	-11.52	42.87	74.00	-31.13	peak	
2	*	48	74.000	40.86	-11.52	29.34	54.00	-24.66	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

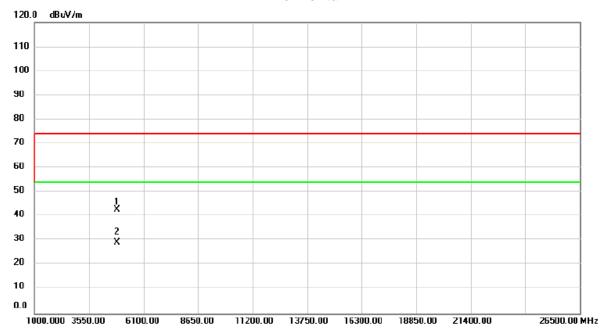
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Horizontal



	No.	Mł	k. Freq.			Measure- ment		Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		4874.000	54.42	-11.52	42.90	74.00	-31.10	peak	
_	2	*	4874.000	40.86	-11.52	29.34	54.00	-24.66	AVG	

REMARKS:

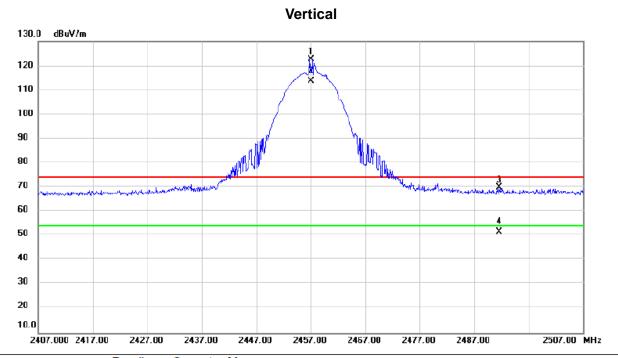
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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	No.	Mk	c. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1	X	2457.000	91.60	31.09	122.69	74.00	48.69	peak	No Limit
	2	*	2457.000	82.68	31.09	113.77	54.00	59.77	AVG	No Limit
	3		2491.600	38.52	31.20	69.72	74.00	-4.28	peak	
	4		2491.600	20.27	31.20	51.47	54.00	-2.53	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

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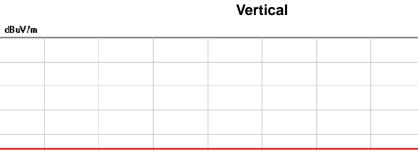
120.0

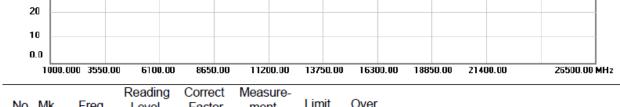
40 30



Test Mode TX B MODE CHANNEL 10

X





No. N	/lk. Freq.	Level		ment	Limit	Over				
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment		
1	4914.000	53.80	-11.49	42.31	74.00	-31.69	peak			_
2 *	4914.000	40.74	-11.49	29.25	54.00	-24.75	AVG			_

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

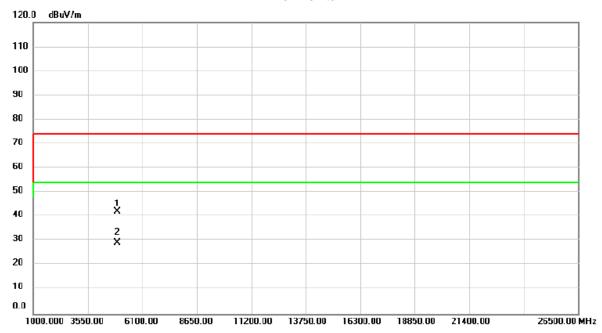
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Horizontal



No).	Mk.	. Freq.		Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
-	1		4914.000	53.56	-11.49	42.07	74.00	-31.93	peak	
	2	*	4914.000	40.71	-11.49	29.22	54.00	-24.78	AVG	

REMARKS:

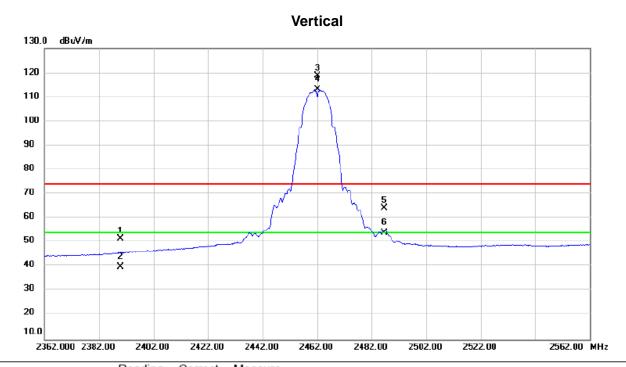
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

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	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
-	1		2389.804	20.76	30.86	51.62	74.00	-22.38	peak	
-	2		2389.804	8.95	30.86	39.81	54.00	-14.19	AVG	
-	3	Χ	2462.000	87.71	31.10	118.81	74.00	44.81	peak	No Limit
-	4	*	2462.000	82.10	31.10	113.20	54.00	59.20	AVG	No Limit
-	5		2486.734	32.96	31.19	64.15	74.00	-9.85	peak	
-	6		2486.734	22.68	31.19	53.87	54.00	-0.13	AVG	

REMARKS:

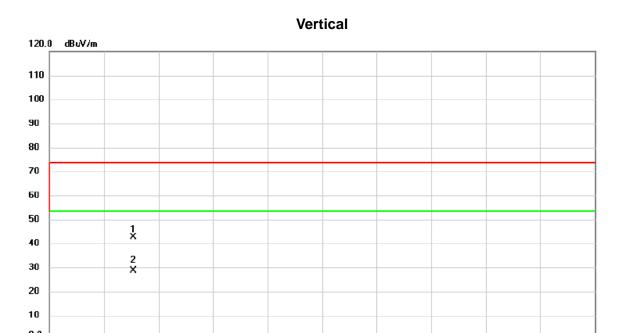
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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No.	Mł	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	54.80	-11.47	43.33	74.00	-30.67	peak	
2	*	4924.000	40.94	-11.47	29.47	54.00	-24.53	AVG	

13750.00

16300.00

18850.00

21400.00

26500.00 MHz

REMARKS:

1000.000 3550.00

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

6100.00

8650.00

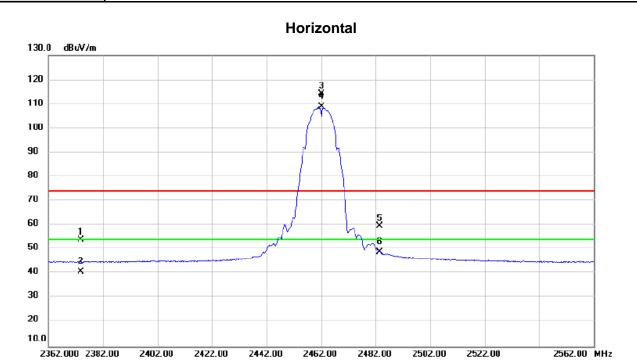
11200.00

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	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		2373.900	23.10	30.81	53.91	74.00	-20.09	peak	
	2		2373.900	9.79	30.81	40.60	54.00	-13.40	AVG	
_	3	X	2462.000	83.17	31.10	114.27	74.00	40.27	peak	No Limit
_	4	*	2462.000	77.81	31.10	108.91	54.00	54.91	AVG	No Limit
	5		2483.566	28.50	31.18	59.68	74.00	-14.32	peak	
_	6		2483.566	17.74	31.18	48.92	54.00	-5.08	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

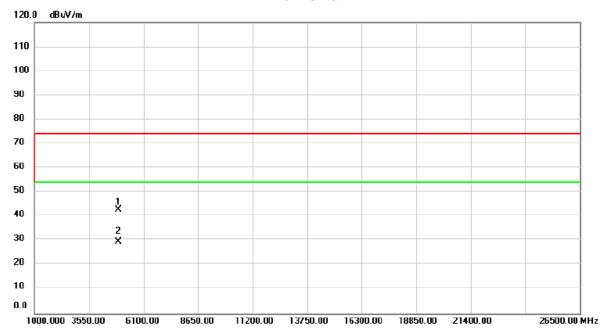
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	No.	Mł	c. Freq.			Measure- ment		Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1		4924.000	54.13	-11.47	42.66	74.00	-31.34	peak	
	2	*	4924.000	40.91	-11.47	29.44	54.00	-24.56	AVG	

REMARKS:

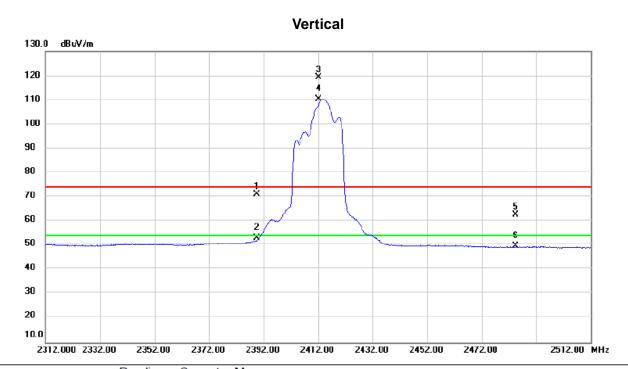
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
_			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		2389.454	40.31	30.86	71.17	74.00	-2.83	peak	
_	2		2389.454	22.32	30.86	53.18	54.00	-0.82	AVG	
_	3	Χ	2412.000	88.41	30.94	119.35	74.00	45.35	peak	No Limit
	4	*	2412.000	79.36	30.94	110.30	54.00	56.30	AVG	No Limit
_	5		2484.342	31.60	31.18	62.78	74.00	-11.22	peak	
	6		2484.342	18.60	31.18	49.78	54.00	-4.22	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

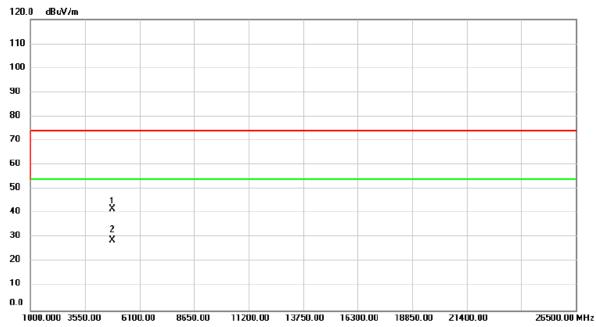
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N	0.	Mk	c. Freq.			Measure- ment		Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		4824.000	53.34	-11.58	41.76	74.00	-32.24	peak	
	2	*	4824.000	40.43	-11.58	28.85	54.00	-25.15	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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Horizontal 130.0 dBuV/m 120 110 100 90 80 70 X X 5 X 60 50 30 20

Ν	lo.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		2390.000	32.85	30.86	63.71	74.00	-10.29	peak	
	2		2390.000	18.30	30.86	49.16	54.00	-4.84	AVG	
	3	Χ	2412.000	82.56	30.94	113.50	74.00	39.50	peak	No Limit
	4	*	2412.000	73.44	30.94	104.38	54.00	50.38	AVG	No Limit
	5		2485.183	29.27	31.18	60.45	74.00	-13.55	peak	
	6		2485.183	16.83	31.18	48.01	54.00	-5.99	AVG	

2412.00

2432.00

2452.00

2472.00

REMARKS:

2312.000 2332.00

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

2352.00

2372.00

2392.00

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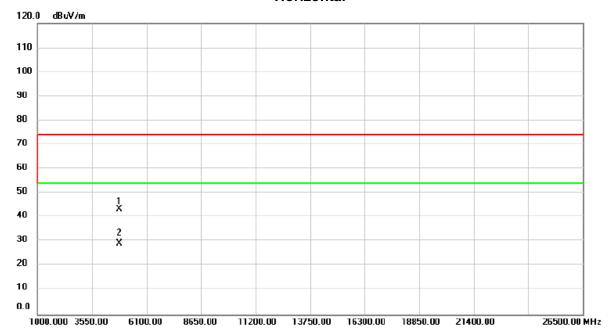
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2512.00 MHz





Horizontal



No	. M	k.	Freq.			Measure- ment		Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		482	24.000	54.88	-11.58	43.30	74.00	-30.70	peak	
2	*	482	24.000	40.88	-11.58	29.30	54.00	-24.70	AVG	

REMARKS:

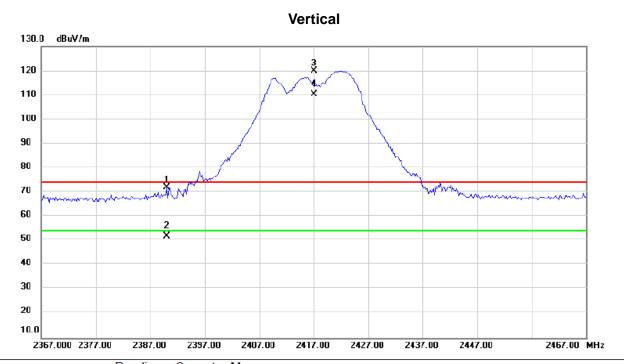
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		2390.000	40.96	30.86	71.82	74.00	-2.18	peak	
	2		2390.000	20.94	30.86	51.80	54.00	-2.20	AVG	
	3	X	2417.000	88.91	30.95	119.86	74.00	45.86	peak	No Limit
	4	*	2417.000	79.54	30.95	110.49	54.00	56.49	AVG	No Limit

REMARKS:

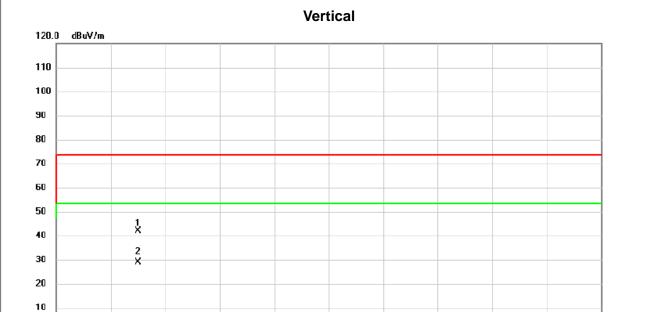
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

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No.	Mk	k. Freq.	Reading Level		Measure- ment		Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4834.000	54.23	-11.57	42.66	74.00	-31.34	peak	
2	*	4834.000	41.49	-11.57	29.92	54.00	-24.08	AVG	

13750.00

16300.00

18850.00

21400.00

26500.00 MHz

REMARKS:

0.0

1000.000 3550.00

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

6100.00

8650.00

11200.00

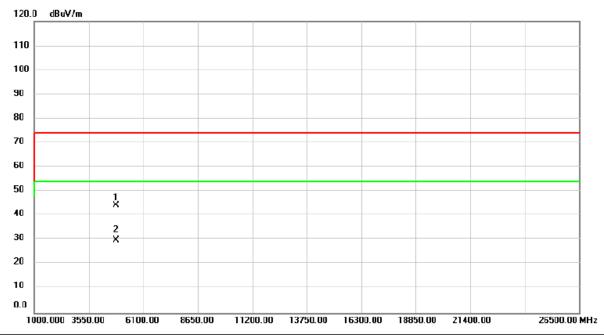
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No.	M	k. Freq.		Correct Factor	Measure- ment		Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4834.000	55.89	-11.57	44.32	74.00	-29.68	peak	
2	*	4834.000	41.50	-11.57	29.93	54.00	-24.07	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

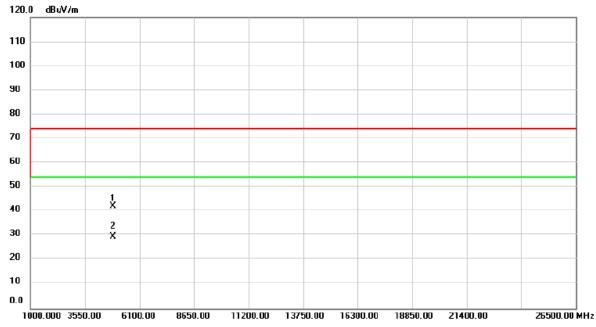
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No	. M	lk.	Freq.			Measure- ment		Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		48	74.000	53.81	-11.52	42.29	74.00	-31.71	peak	
2	*	48	74.000	40.96	-11.52	29.44	54.00	-24.56	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

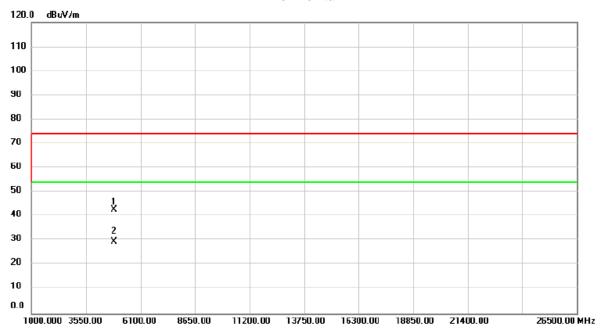
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No.	Mk	c. Fre	eq.			Measure- ment		Over		
		MH	z	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.0	00	54.14	-11.52	42.62	74.00	-31.38	peak	
2	*	4874.0	00	41.02	-11.52	29.50	54.00	-24.50	AVG	

REMARKS:

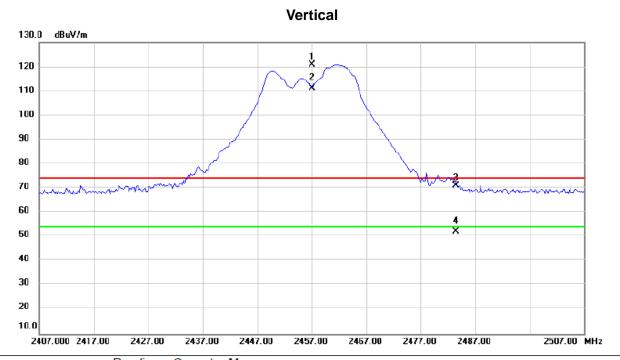
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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	No.	Mk	c. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1	X	2457.000	89.90	31.09	120.99	74.00	46.99	peak	No Limit
	2	*	2457.000	80.15	31.09	111.24	54.00	57.24	AVG	No Limit
	3		2483.500	39.99	31.18	71.17	74.00	-2.83	peak	
	4		2483.500	20.85	31.18	52.03	54.00	-1.97	AVG	

REMARKS:

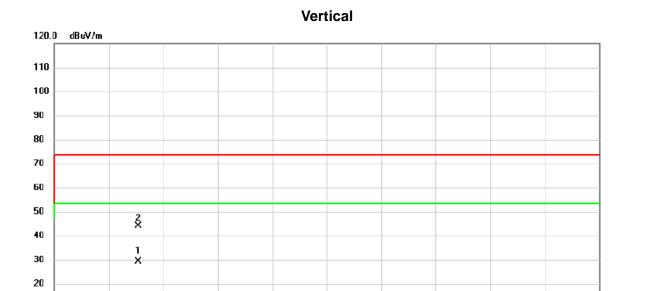
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

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No.	N	∕lk.	Freq.	Reading Level		Measure- ment		Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	49	913.577	41.52	-11.49	30.03	54.00	-23.97	AVG	
2		49	914.384	56.39	-11.49	44.90	74.00	-29.10	peak	

13750.00

16300.00

18850.00

21400.00

26500.00 MHz

REMARKS:

10 0.0

1000.000 3550.00

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

6100.00

8650.00

11200.00

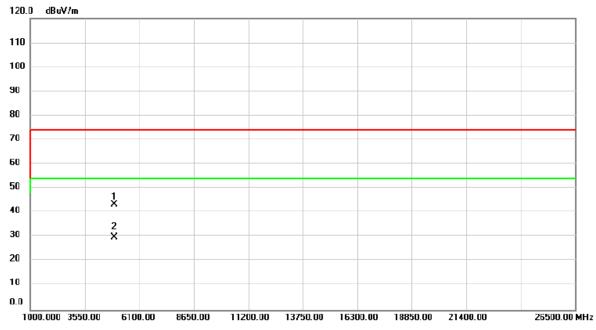
Report No.: BTL-FCCP-1-1812C143

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N	lo.	Mk	k. Freq.			Measure- ment		Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		4914.000	54.95	-11.49	43.46	74.00	-30.54	peak	
	2	*	4914.000	41.36	-11.49	29.87	54.00	-24.13	AVG	

REMARKS:

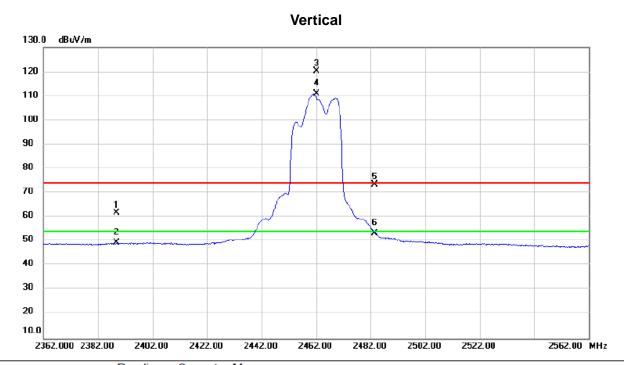
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

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No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2388.740	31.03	30.86	61.89	74.00	-12.11	peak	
2		2388.740	18.63	30.86	49.49	54.00	-4.51	AVG	
3	Χ	2462.000	89.25	31.10	120.35	74.00	46.35	peak	No Limit
4	*	2462.000	79.91	31.10	111.01	54.00	57.01	AVG	No Limit
5		2483.500	42.18	31.18	73.36	74.00	-0.64	peak	
6		2483.500	22.02	31.18	53.20	54.00	-0.80	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

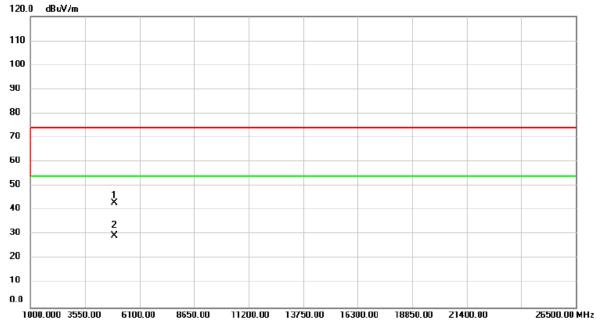
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	No.	Mł	k. Freq.			Measure- ment		Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1		4924.000	54.58	-11.47	43.11	74.00	-30.89	peak	
_	2	*	4924.000	40.90	-11.47	29.43	54.00	-24.57	AVG	

REMARKS:

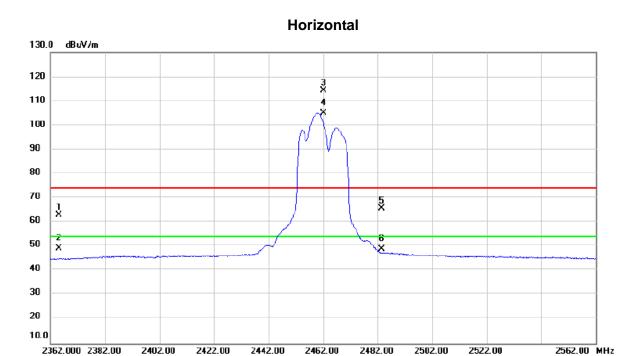
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
_			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1		2365.080	32.26	30.79	63.05	74.00	-10.95	peak	
_	2		2365.080	18.23	30.79	49.02	54.00	-4.98	AVG	
_	3	Χ	2462.000	83.03	31.10	114.13	74.00	40.13	peak	No Limit
_	4	*	2462.000	73.79	31.10	104.89	54.00	50.89	AVG	No Limit
_	5		2483.500	34.38	31.18	65.56	74.00	-8.44	peak	
	6		2483.500	17.71	31.18	48.89	54.00	-5.11	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

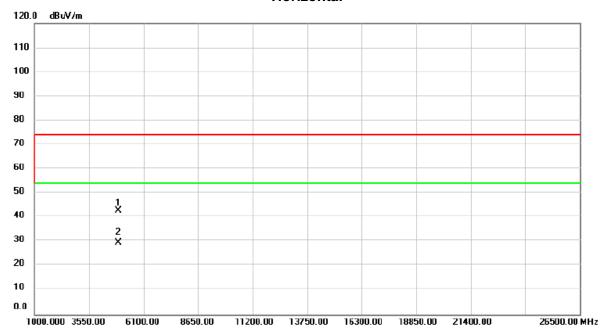
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No.	M	k. Freq.			Measure- ment		Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	54.23	-11.47	42.76	74.00	-31.24	peak	
2	*	4924.000	41.07	-11.47	29.60	54.00	-24.40	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

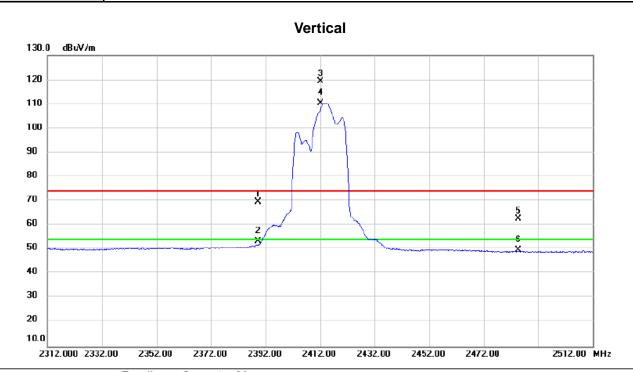
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Test Mode TX N (HT20) MODE CHANNEL 01



	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1		2389.142	38.76	30.86	69.62	74.00	-4.38	peak	
-	2		2389.142	22.45	30.86	53.31	54.00	-0.69	AVG	
-	3	Χ	2412.000	88.55	30.94	119.49	74.00	45.49	peak	No Limit
-	4	*	2412.000	79.44	30.94	110.38	54.00	56.38	AVG	No Limit
-	5		2484.589	31.45	31.18	62.63	74.00	-11.37	peak	
-	6		2484.589	18.57	31.18	49.75	54.00	-4.25	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

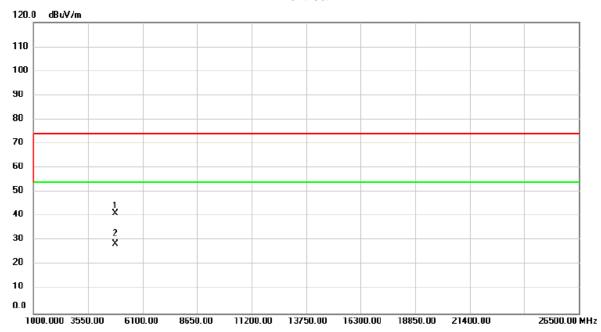
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N	lo.	Mŀ	k. Freq.			Measure- ment		Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		4824.000	52.91	-11.58	41.33	74.00	-32.67	peak	
	2	*	4824.000	40.34	-11.58	28.76	54.00	-25.24	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

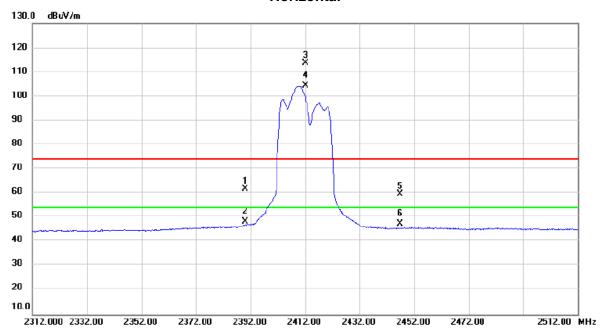
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Horizontal



	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		2390.000	30.93	30.86	61.79	74.00	-12.21	peak	
	2		2390.000	17.38	30.86	48.24	54.00	-5.76	AVG	
	3	X	2412.000	82.71	30.94	113.65	74.00	39.65	peak	No Limit
.	4	*	2412.000	73.27	30.94	104.21	54.00	50.21	AVG	No Limit
	5		2446.720	28.58	31.05	59.63	74.00	-14.37	peak	
'	6		2446.720	16.36	31.05	47.41	54.00	-6.59	AVG	

REMARKS:

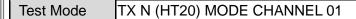
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

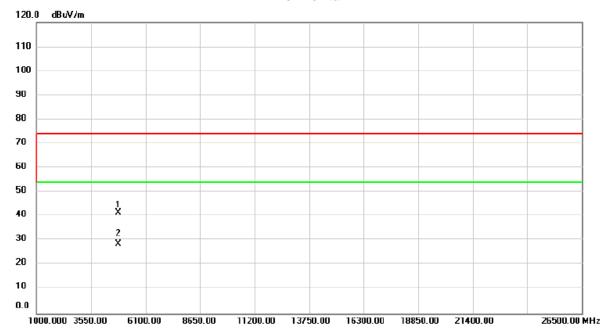
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-	No.	M	k. Freq.			Measure- ment		Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		4824.000	53.09	-11.58	41.51	74.00	-32.49	peak	
	2	*	4824.000	40.29	-11.58	28.71	54.00	-25.29	AVG	

REMARKS:

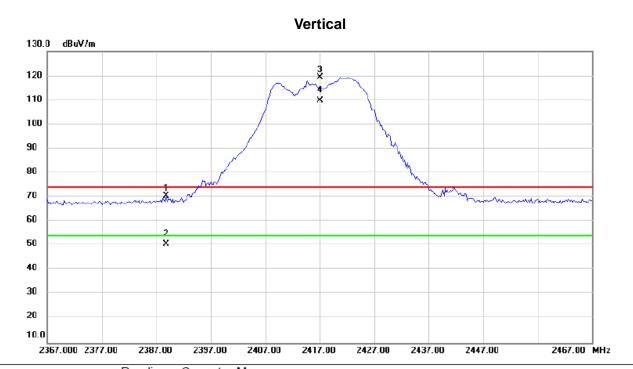
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		2388.800	39.62	30.86	70.48	74.00	-3.52	peak	
	2		2388.800	19.89	30.86	50.75	54.00	-3.25	AVG	
	3	X	2417.000	88.29	30.95	119.24	74.00	45.24	peak	No Limit
-	4	*	2417.000	78.84	30.95	109.79	54.00	55.79	AVG	No Limit

REMARKS:

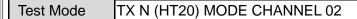
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

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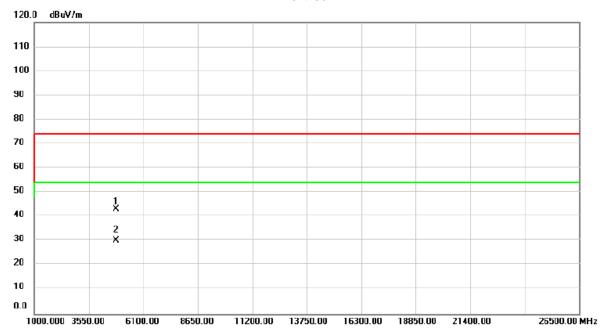
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No). N	Λk.	Freq.	Reading Level		Measure- ment		Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	1	48	34.000	54.56	-11.57	42.99	74.00	-31.01	peak	
2	*	48	334.000	41.73	-11.57	30.16	54.00	-23.84	AVG	

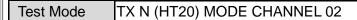
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

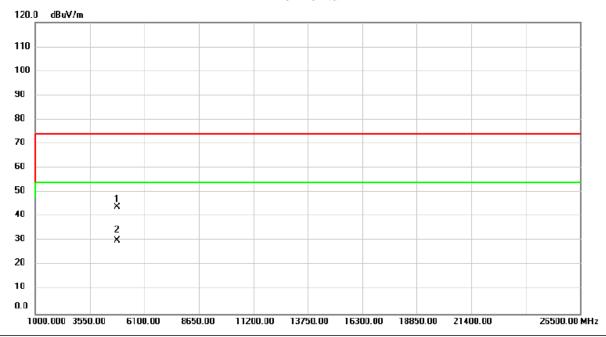
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	No.	Mk	c. Freq.	Reading Level		Measure- ment		Over		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
-	1		4834.000	55.65	-11.57	44.08	74.00	-29.92	peak	
-	2	*	4834.000	41.64	-11.57	30.07	54.00	-23.93	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

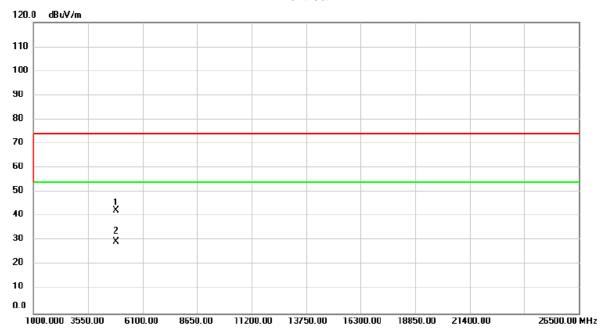
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1	No.	M	k. Free			Measure- ment		Over			
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment	
	1		4874.00	0 54.12	-11.52	42.60	74.00	-31.40	peak		
	2	*	4874.00	0 41.00	-11.52	29.48	54.00	-24.52	AVG		

REMARKS:

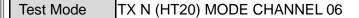
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

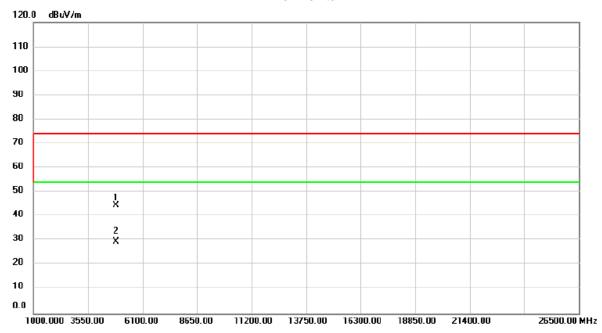
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1	No.	M	k.	Freq.			Measure- ment		Over		
				MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		48	74.000	56.02	-11.52	44.50	74.00	-29.50	peak	
	2	*	48	74.000	40.94	-11.52	29.42	54.00	-24.58	AVG	

REMARKS:

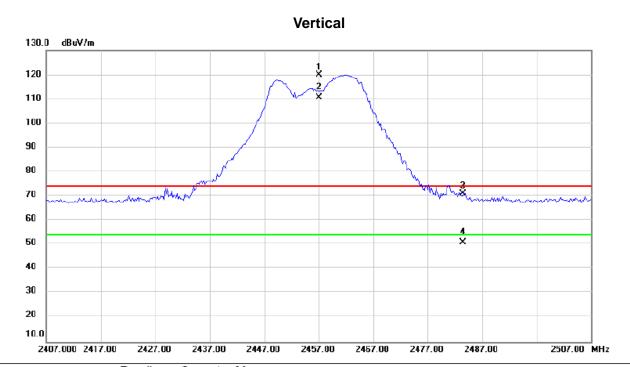
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1	X	2457.000	88.82	31.09	119.91	74.00	45.91	peak	No Limit
	2	*	2457.000	79.45	31.09	110.54	54.00	56.54	AVG	No Limit
	3		2483.500	39.88	31.18	71.06	74.00	-2.94	peak	
_	4		2483.500	19.77	31.18	50.95	54.00	-3.05	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

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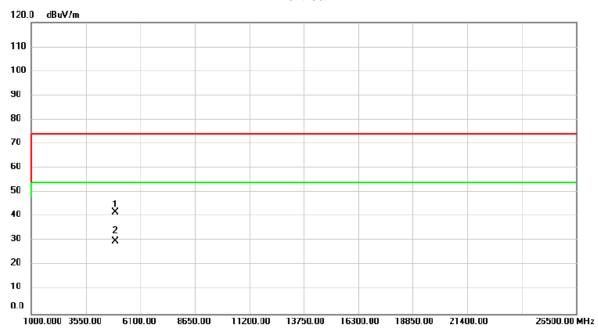
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No.	M	k. Freq.		Correct Factor	Measure- ment		Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4914.000	53.38	-11.49	41.89	74.00	-32.11	peak	
2	*	4914.000	41.47	-11.49	29.98	54.00	-24.02	AVG	

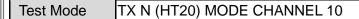
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

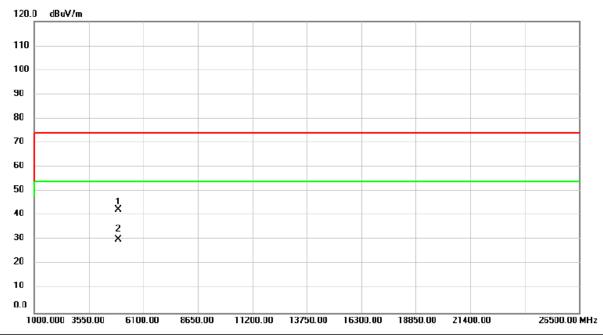
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No.	M	k. Freq.		Correct Factor	Measure- ment		Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4914.000	53.82	-11.49	42.33	74.00	-31.67	peak	
2	*	4914.000	41.68	-11.49	30.19	54.00	-23.81	AVG	

REMARKS:

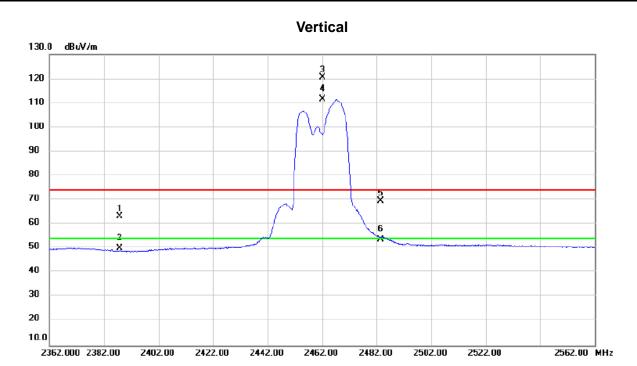
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

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	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
-	1		2387.732	32.43	30.86	63.29	74.00	-10.71	peak	
_	2		2387.732	19.14	30.86	50.00	54.00	-4.00	AVG	
_	3	Χ	2462.000	89.55	31.10	120.65	74.00	46.65	peak	No Limit
_	4	*	2462.000	80.38	31.10	111.48	54.00	57.48	AVG	No Limit
_	5		2483.582	38.36	31.18	69.54	74.00	-4.46	peak	
	6		2483.582	22.43	31.18	53.61	54.00	-0.39	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

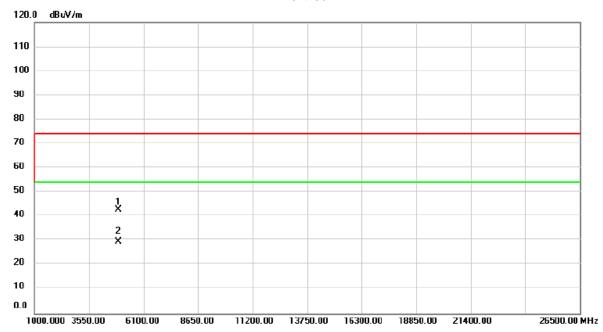
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No.	Mk	c. Freq.	Reading Level		Measure- ment		Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.000	54.31	-11.47	42.84	74.00	-31.16	peak	
2	*	4924.000	41.14	-11.47	29.67	54.00	-24.33	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

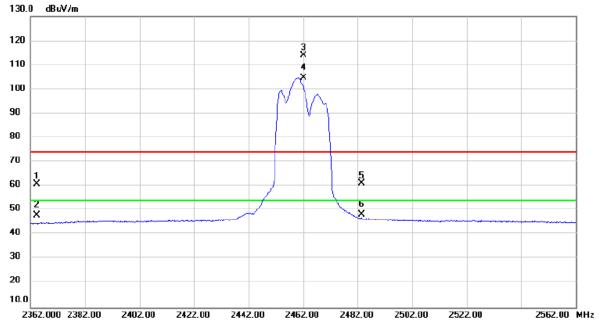
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Horizontal



	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
_			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		2364.184	30.14	30.78	60.92	74.00	-13.08	peak	
_	2		2364.184	17.25	30.78	48.03	54.00	-5.97	AVG	
_	3	Χ	2462.000	83.00	31.10	114.10	74.00	40.10	peak	No Limit
_	4	*	2462.000	73.48	31.10	104.58	54.00	50.58	AVG	No Limit
_	5		2483.550	30.08	31.18	61.26	74.00	-12.74	peak	
_	6		2483.550	16.92	31.18	48.10	54.00	-5.90	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

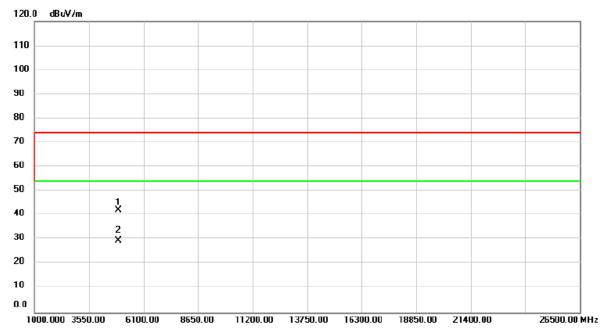
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	No.	Mł	k. Freq.			Measure- ment		Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1		4924.000	53.64	-11.47	42.17	74.00	-31.83	peak	
	2	*	4924.000	41.00	-11.47	29.53	54.00	-24.47	AVG	

REMARKS:

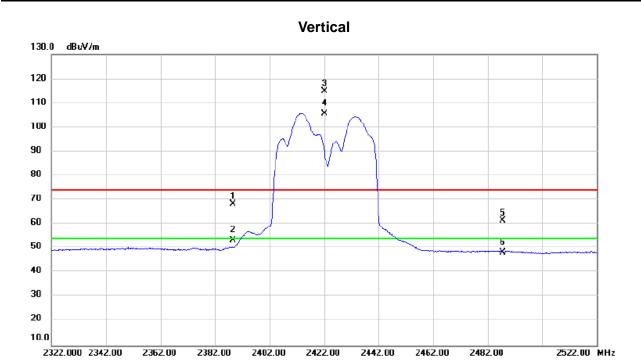
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1		2388.504	37.53	30.86	68.39	74.00	-5.61	peak	
_	2		2388.504	22.62	30.86	53.48	54.00	-0.52	AVG	
_	3	Χ	2422.000	83.84	30.98	114.82	74.00	40.82	peak	No Limit
_	4	*	2422.000	74.46	30.98	105.44	54.00	51.44	AVG	No Limit
_	5		2487.575	30.20	31.19	61.39	74.00	-12.61	peak	
_	6		2487.575	17.03	31.19	48.22	54.00	-5.78	AVG	

REMARKS:

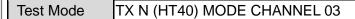
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

Report No.: BTL-FCCP-1-1812C143

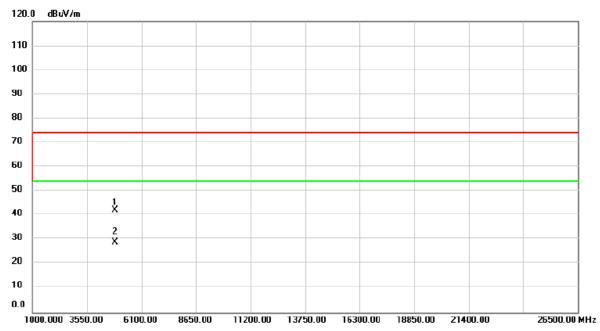
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N	0.	M	c. Freq.			Measure- ment		Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		4844.000	53.63	-11.56	42.07	74.00	-31.93	peak	
	2	*	4844.000	40.47	-11.56	28.91	54.00	-25.09	AVG	

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

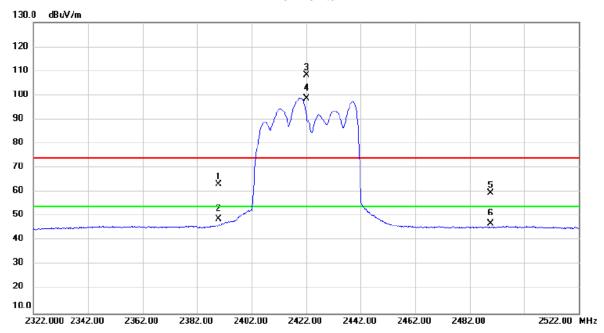
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Horizontal



No.	M	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2389.932	32.26	30.86	63.12	74.00	-10.88	peak	
2		2389.932	17.98	30.86	48.84	54.00	-5.16	AVG	
3	X	2422.000	77.26	30.98	108.24	74.00	34.24	peak	No Limit
4	*	2422.000	67.78	30.98	98.76	54.00	44.76	AVG	No Limit
5		2489.523	28.47	31.19	59.66	74.00	-14.34	peak	
6		2489.523	15.89	31.19	47.08	54.00	-6.92	AVG	

REMARKS:

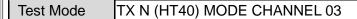
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

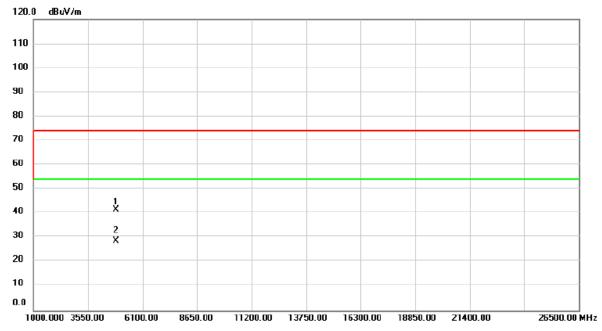
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N	0.	MI	k.	Freq.			Measure- ment		Over		
				MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		48	44.000	53.16	-11.56	41.60	74.00	-32.40	peak	
	2	*	48	44.000	40.36	-11.56	28.80	54.00	-25.20	AVG	

REMARKS:

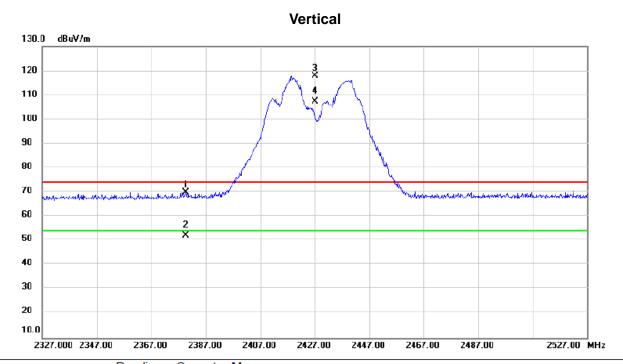
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		2379.600	39.15	30.84	69.99	74.00	-4.01	peak	
	2		2379.600	21.20	30.84	52.04	54.00	-1.96	AVG	
	3	X	2427.000	86.83	30.99	117.82	74.00	43.82	peak	No Limit
	4	*	2427.000	76.22	30.99	107.21	54.00	53.21	AVG	No Limit

REMARKS:

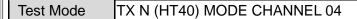
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

Report No.: BTL-FCCP-1-1812C143

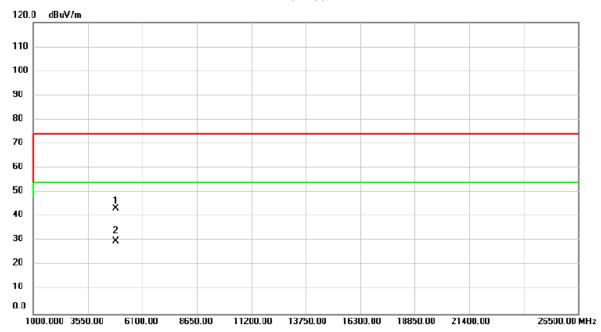
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No.	MI	k. Freq.		Correct Factor	Measure- ment		Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4854.000	54.75	-11.55	43.20	74.00	-30.80	peak	
2	*	4854.000	41.49	-11.55	29.94	54.00	-24.06	AVG	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

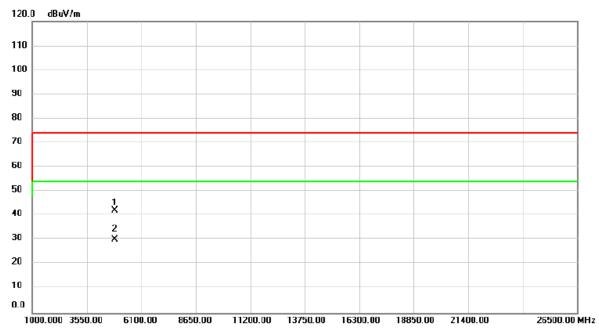
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No.	M	k. Freq.			Measure- ment		Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4854.000	53.68	-11.55	42.13	74.00	-31.87	peak	
2	*	4854.000	41.79	-11.55	30.24	54.00	-23.76	AVG	

REMARKS:

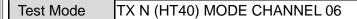
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

Report No.: BTL-FCCP-1-1812C143

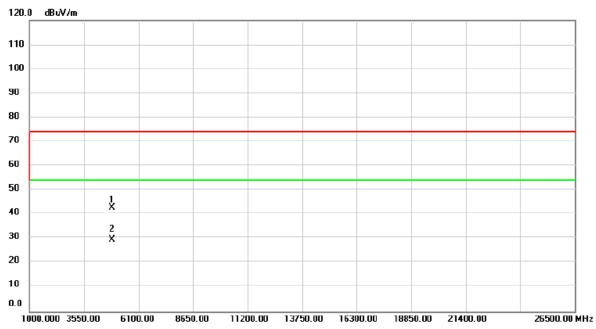
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No	. M	lk.	Freq.			Measure- ment		Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		48	74.000	54.29	-11.52	42.77	74.00	-31.23	peak	
2	*	48	74.000	41.06	-11.52	29.54	54.00	-24.46	AVG	

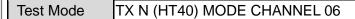
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

Report No.: BTL-FCCP-1-1812C143

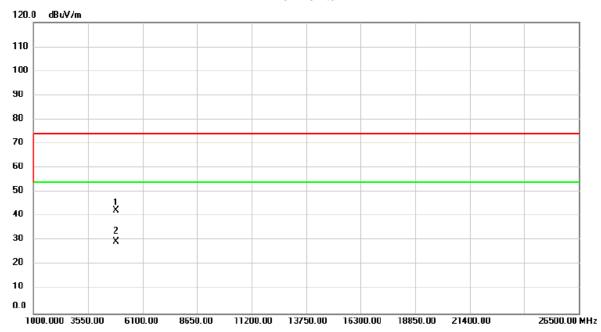
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No). N	Иk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4	874.000	54.01	-11.52	42.49	74.00	-31.51	peak	
2	*	4	874.000	41.07	-11.52	29.55	54.00	-24.45	AVG	

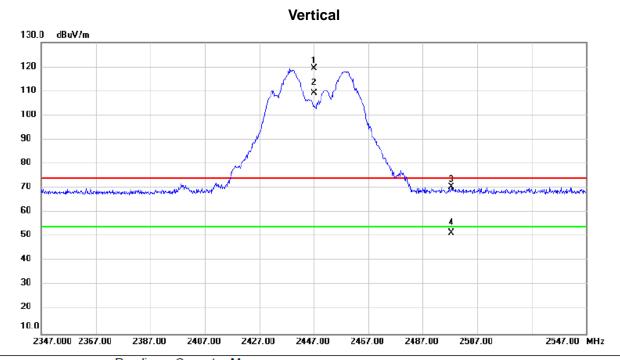
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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	No.	Mk	c. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1	X	2447.000	88.31	31.05	119.36	74.00	45.36	peak	No Limit
	2	*	2447.000	78.06	31.05	109.11	54.00	55.11	AVG	No Limit
	3		2497.600	39.14	31.22	70.36	74.00	-3.64	peak	
	4		2497.600	20.44	31.22	51.66	54.00	-2.34	AVG	

REMARKS:

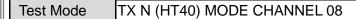
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

Report No.: BTL-FCCP-1-1812C143

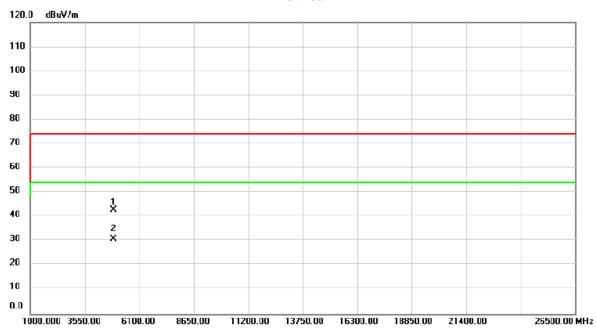
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No	M	k. Freq.	Reading Level		Measure- ment		Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4894.000	54.19	-11.50	42.69	74.00	-31.31	peak	
2	*	4894.000	42.36	-11.50	30.86	54.00	-23.14	AVG	

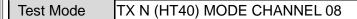
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

Report No.: BTL-FCCP-1-1812C143

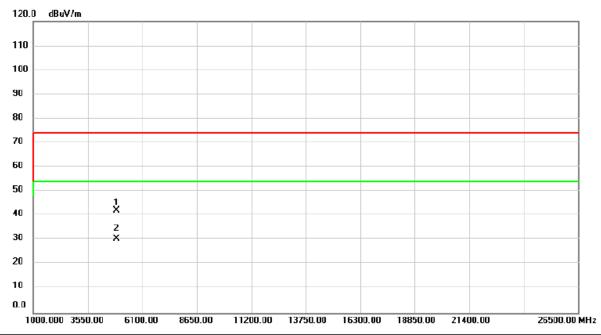
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No.	М	k. Fre			Correct Factor	Measure- ment		Over		
		МН	Z	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4894.0	00	53.61	-11.50	42.11	74.00	-31.89	peak	
2	*	4894.0	00	41.98	-11.50	30.48	54.00	-23.52	AVG	

- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

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Vertical 130.0 dBuV/m 120 110 100 90 80 5 X 70 60 50 40 30 20 2352.000 2372.00 2392.00 2412.00 2432.00 2452.00 2472.00 2492.00 2512.00 2552.00 MHz

	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1		2370.962	32.84	30.80	63.64	74.00	-10.36	peak	
_	2		2370.962	20.73	30.80	51.53	54.00	-2.47	AVG	
_	3	Χ	2452.000	85.19	31.08	116.27	74.00	42.27	peak	No Limit
_	4	*	2452.000	75.91	31.08	106.99	54.00	52.99	AVG	No Limit
_	5		2483.615	36.82	31.18	68.00	74.00	-6.00	peak	
_	6		2483.615	22.33	31.18	53.51	54.00	-0.49	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

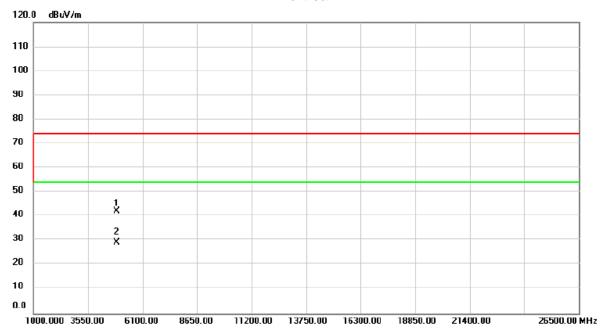
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	No.	MI	k. Fre	q.	Reading Level		Measure- ment	Limit	Over		
			MH	Z	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1		4904.0	00	53.63	-11.49	42.14	74.00	-31.86	peak	
	2	*	4904.0	00	40.87	-11.49	29.38	54.00	-24.62	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

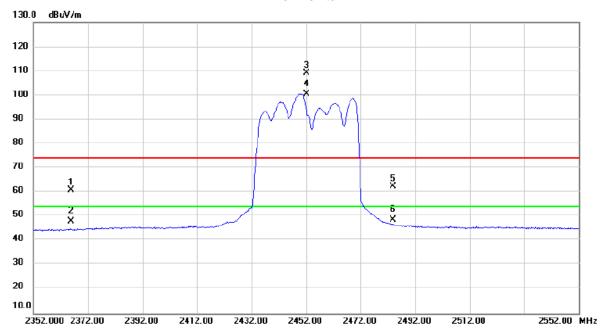
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Horizontal



	No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
_	1		2365.760	30.09	30.79	60.88	74.00	-13.12	peak	
_	2		2365.760	17.16	30.79	47.95	54.00	-6.05	AVG	
_	3	Χ	2452.000	77.93	31.08	109.01	74.00	35.01	peak	No Limit
_	4	*	2452.000	69.52	31.08	100.60	54.00	46.60	AVG	No Limit
_	5		2483.896	31.30	31.18	62.48	74.00	-11.52	peak	
_	6		2483.896	17.45	31.18	48.63	54.00	-5.37	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

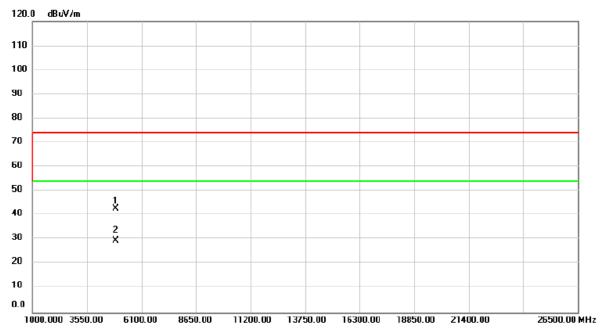
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1	No.	М	k.	Freq.			Measure- ment		Over		
				MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1		49	904.000	54.18	-11.49	42.69	74.00	-31.31	peak	
	2	*	49	904.000	41.05	-11.49	29.56	54.00	-24.44	AVG	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

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Α	P	P	EI	NC	XIC	E	В	ΑI	ND	V	V١	D	T	Н
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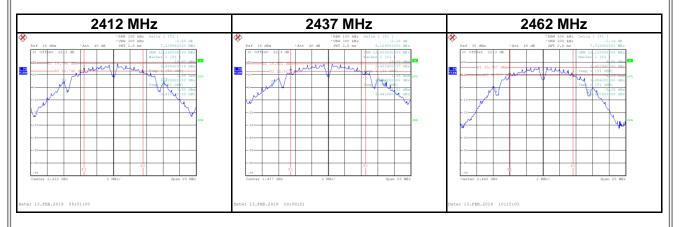
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Test Mode IEEE 802.11b_ANT 1

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	7.14	12.24	500	Complies
06	2437	9.11	13.60	500	Complies
11	2462	7.71	11.12	500	Complies



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Test Mode IEEE 802.11g_ANT 1

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	16.37	16.44	500	Complies
06	2437	16.32	16.44	500	Complies
11	2462	16.39	16.44	500	Complies



Test Mode	IEEE 802.11g_ANT 2
	3—

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	16.39	16.44	500	Complies
06	2437	16.38	16.44	500	Complies
11	2462	16.39	16.44	500	Complies



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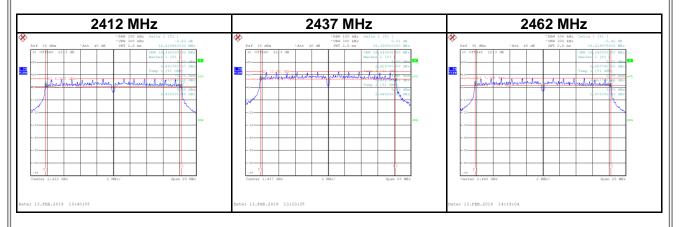
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Test Mode IEEE 802.11g_ANT 3

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	16.42	16.44	500	Complies
06	2437	16.39	16.44	500	Complies
11	2462	16.42	16.44	500	Complies



Test Mode	IEEE 802.11g_ANT 4
	3_

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	16.42	16.44	500	Complies
06	2437	16.39	16.44	500	Complies
11	2462	16.42	16.44	500	Complies



Report No.: BTL-FCCP-1-1812C143

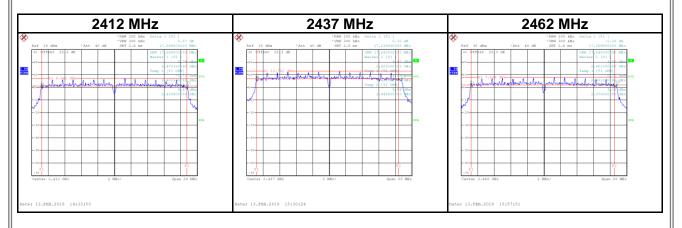
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Test Mode IEEE 802.11n (HT20)_ANT 1

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	17.60	17.64	500	Complies
06	2437	17.24	17.64	500	Complies
11	2462	17.36	17.64	500	Complies



Test Mode IEEE 802.11n (HT20)_ANT 2

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	17.62	17.64	500	Complies
06	2437	17.60	17.64	500	Complies
11	2462	17.59	17.64	500	Complies



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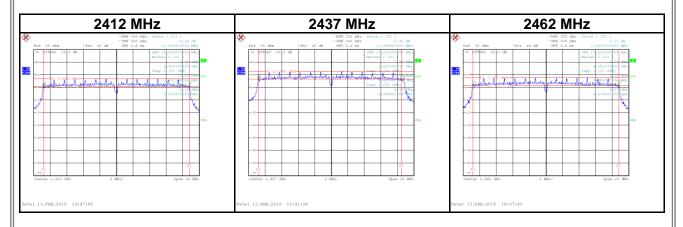
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Test Mode IEEE 802.11n (HT20)_ANT 3

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	17.62	17.64	500	Complies
06	2437	17.36	17.64	500	Complies
11	2462	17.63	17.64	500	Complies



Test Mode IEEE 802.11n (HT20)_ANT 4

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	17.62	17.64	500	Complies
06	2437	17.36	17.64	500	Complies
11	2462	17.63	17.64	500	Complies



Report No.: BTL-FCCP-1-1812C143

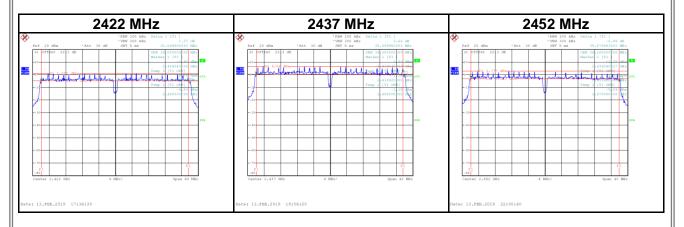
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Test Mode IEEE 802.11n (HT40)_ANT 1

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
03	2422	35.60	36.08	500	Complies
06	2437	35.60	36.08	500	Complies
09	2452	35.88	36.16	500	Complies



Test Mode IEEE 802.11n (HT40)_ANT 2

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
03	2422	35.91	36.08	500	Complies
06	2437	35.60	36.00	500	Complies
09	2452	35.60	36.16	500	Complies



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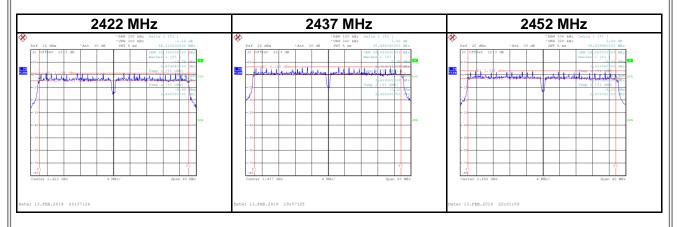
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Test Mode IEEE 802.11n (HT40)_ANT 3

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
03	2422	36.12	36.16	500	Complies
06	2437	35.60	36.08	500	Complies
09	2452	35.84	36.08	500	Complies



Test Mode IEEE 802.11n (HT40)_ANT 4

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Emission Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
03	2422	35.84	36.08	500	Complies
06	2437	35.53	36.08	500	Complies
09	2452	35.84	36.08	500	Complies



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	APPENDIX F	CONDUCTED OUTPUT POWER	

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Test Mode IEEE 802.11b_ANT 1

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)		Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	26.15	0.4121	30.00	1.0000	Complies
06	2437	29.01	0.7962	30.00	1.0000	Complies
11	2462	25.75	0.3758	30.00	1.0000	Complies

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Test Mode IEEE 802.11g_ANT 1

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)	Max. Conducted Output Power (W)		Max. Limit (W)	Result
01	2412	18.49	0.0706	30.00	1.0000	Complies
06	2437	23.81	0.2404	30.00	1.0000	Complies
11	2462	19.71	0.0935	30.00	1.0000	Complies

Test Mode IEEE 802.11g_ANT 2

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)			Max. Limit (W)	Result
01	2412	18.19	0.0659	30.00	1.0000	Complies
06	2437	23.59	0.2286	30.00	1.0000	Complies
11	2462	19.05	0.0804	30.00	1.0000	Complies

Test Mode IEEE 802.11g_ANT 3

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)	Max. Conducted Output Power (W)		Max. Limit (W)	Result
01	2412	18.25	0.0668	30.00	1.0000	Complies
06	2437	23.41	0.2193	30.00	1.0000	Complies
11	2462	19.16	0.0824	30.00	1.0000	Complies

Test Mode IEEE 802.11g_ANT 4

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)	Max. Conducted Output Power (W)		Max. Limit (W)	Result
01	2412	18.36	0.0685	30.00	1.0000	Complies
06	2437	23.47	0.2223	30.00	1.0000	Complies
11	2462	19.05	0.0804	30.00	1.0000	Complies

Test Mode IEEE 802.11g_Total

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)			Max. Limit (W)	Result
01	2412	24.34	0.2719	30.00	1.0000	Complies
06	2437	29.59	0.9106	30.00	1.0000	Complies
11	2462	25.27	0.3367	30.00	1.0000	Complies

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Test Mode | IEEE 802.11n (HT20)_ANT 1

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)	Max. Conducted Output Power (W)		Max. Limit (W)	Result
01	2412	18.56	0.0718	30.00	1.0000	Complies
06	2437	23.89	0.2449	30.00	1.0000	Complies
11	2462	19.35	0.0861	30.00	1.0000	Complies

Test Mode IEEE 802.11n (HT20)_ANT 2

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)		Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	18.18	0.0658	30.00	1.0000	Complies
06	2437	23.51	0.2244	30.00	1.0000	Complies
11	2462	18.93	0.0782	30.00	1.0000	Complies

Test Mode IEEE 802.11n (HT20)_ANT 3

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)			Max. Limit (W)	Result
01	2412	18.39	0.0690	30.00	1.0000	Complies
06	2437	23.71	0.2350	30.00	1.0000	Complies
11	2462	19.28	0.0847	30.00	1.0000	Complies

Test Mode IEEE 802.11n (HT20)_ANT 4

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)		Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	18.28	0.0673	30.00	1.0000	Complies
06	2437	23.61	0.2296	30.00	1.0000	Complies
11	2462	18.96	0.0787	30.00	1.0000	Complies

Test Mode IEEE 802.11n (HT20)_Total

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)	Max. Conducted Output Power (W)		Max. Limit (W)	Result
01	2412	24.38	0.2739	30.00	1.0000	Complies
06	2437	29.70	0.9339	30.00	1.0000	Complies
11	2462	25.15	0.3277	30.00	1.0000	Complies

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Test Mode IEEE 802.11n (HT40)_ANT 1

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)		Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	15.84	0.0384	30.00	1.0000	Complies
06	2437	20.95	0.1245	30.00	1.0000	Complies
09	2452	16.86	0.0485	30.00	1.0000	Complies

Test Mode IEEE 802.11n (HT40)_ANT 2

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)		Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	15.33	0.0341	30.00	1.0000	Complies
06	2437	20.23	0.1054	30.00	1.0000	Complies
09	2452	16.68	0.0466	30.00	1.0000	Complies

Test Mode IEEE 802.11n (HT40)_ANT 3

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)			Max. Limit (W)	Result
03	2422	15.51	0.0356	30.00	1.0000	Complies
06	2437	20.24	0.1057	30.00	1.0000	Complies
09	2452	16.79	0.0478	30.00	1.0000	Complies

Test Mode IEEE 802.11n (HT40)_ANT 4

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)		Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	15.18	0.0330	30.00	1.0000	Complies
06	2437	19.77	0.0948	30.00	1.0000	Complies
09	2452	16.34	0.0431	30.00	1.0000	Complies

Test Mode IEEE 802.11n (HT40)_Total

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)	Max. Conducted Output Power (W)		Max. Limit (W)	Result
03	2422	21.49	0.1410	30.00	1.0000	Complies
06	2437	26.34	0.4304	30.00	1.0000	Complies
09	2452	22.69	0.1859	30.00	1.0000	Complies

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Test Mode	IEEE VHT	(VHT20)	_ANT 1
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Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)	Max. Conducted Output Power (W)		Max. Limit (W)	Result
01	2412	18.54	0.0714	30.00	1.0000	Complies
06	2437	23.79	0.2393	30.00	1.0000	Complies
11	2462	19.33	0.0857	30.00	1.0000	Complies

Test Mode IEEE VHT (VHT20)_ANT 2

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)		Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	18.15	0.0653	30.00	1.0000	Complies
06	2437	23.48	0.2228	30.00	1.0000	Complies
11	2462	18.88	0.0773	30.00	1.0000	Complies

Test Mode IEEE VHT (VHT20)_ANT 3

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)	Max. Conducted Output Power (W)		Max. Limit (W)	Result
01	2412	18.47	0.0703	30.00	1.0000	Complies
06	2437	23.67	0.2328	30.00	1.0000	Complies
11	2462	19.15	0.0822	30.00	1.0000	Complies

Test Mode IEEE VHT (VHT20)_ANT 4

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)		Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	18.03	0.0635	30.00	1.0000	Complies
06	2437	23.58	0.2280	30.00	1.0000	Complies
11	2462	18.89	0.0774	30.00	1.0000	Complies

Test Mode IEEE VHT (VHT20)_Total

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)	Max. Conducted Output Power (W)		Max. Limit (W)	Result
01	2412	24.32	0.2706	30.00	1.0000	Complies
06	2437	29.65	0.9230	30.00	1.0000	Complies
11	2462	25.09	0.3226	30.00	1.0000	Complies

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Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)	Max. Conducted Output Power (W)		Max. Limit (W)	Result
03	2422	15.71	0.0372	30.00	1.0000	Complies
06	2437	20.92	0.1236	30.00	1.0000	Complies
09	2452	16.77	0.0475	30.00	1.0000	Complies

Test Mode IEEE VHT (VHT40)_ANT 2

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)		Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	15.23	0.0333	30.00	1.0000	Complies
06	2437	20.11	0.1026	30.00	1.0000	Complies
09	2452	16.58	0.0455	30.00	1.0000	Complies

Test Mode IEEE VHT (VHT40)_ANT 3

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)			Max. Limit (W)	Result
03	2422	15.38	0.0345	30.00	1.0000	Complies
06	2437	20.19	0.1045	30.00	1.0000	Complies
09	2452	16.75	0.0473	30.00	1.0000	Complies

Test Mode IEEE VHT (VHT40)_ANT 4

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)		Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	15.11	0.0324	30.00	1.0000	Complies
06	2437	19.75	0.0944	30.00	1.0000	Complies
09	2452	16.31	0.0428	30.00	1.0000	Complies

Test Mode IEEE VHT (VHT40)_Total

Channel	Frequency (MHz)	Max. Conducted Output Power (dBm)			Max. Limit (W)	Result
03	2422	21.38	0.1375	30.00	1.0000	Complies
06	2437	26.28	0.4250	30.00	1.0000	Complies
09	2452	22.63	0.1831	30.00	1.0000	Complies

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APPENDIX G	ANTENNA CONDUCTED SPURIOUS EMISSIONS

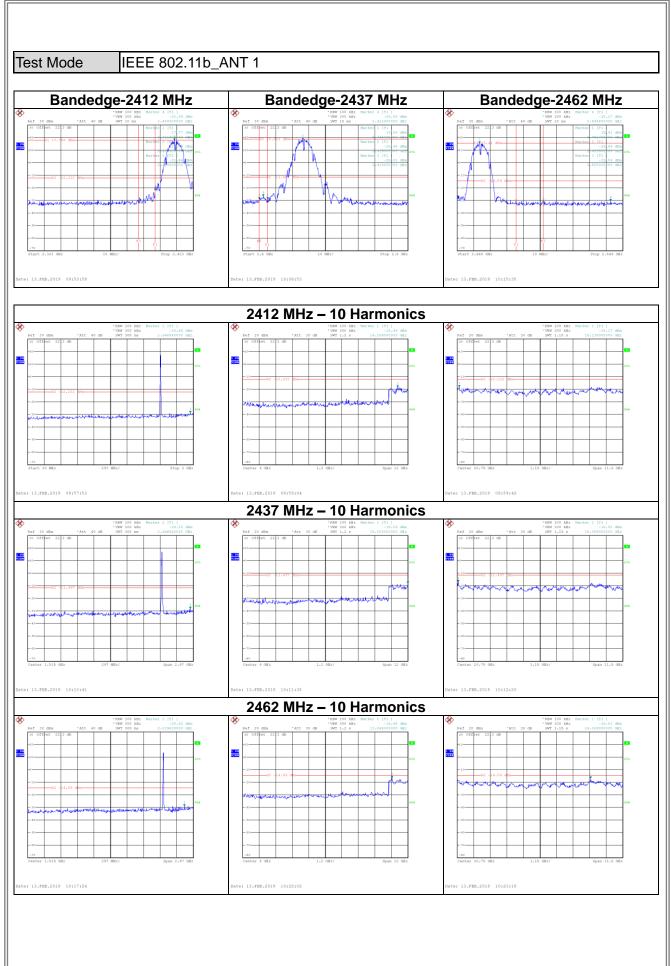
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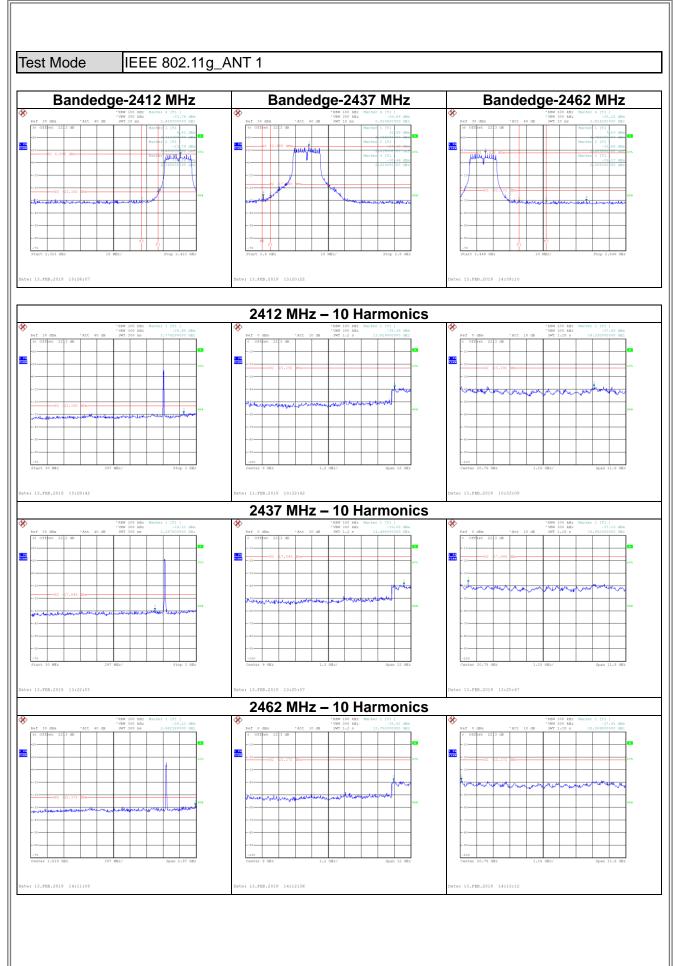




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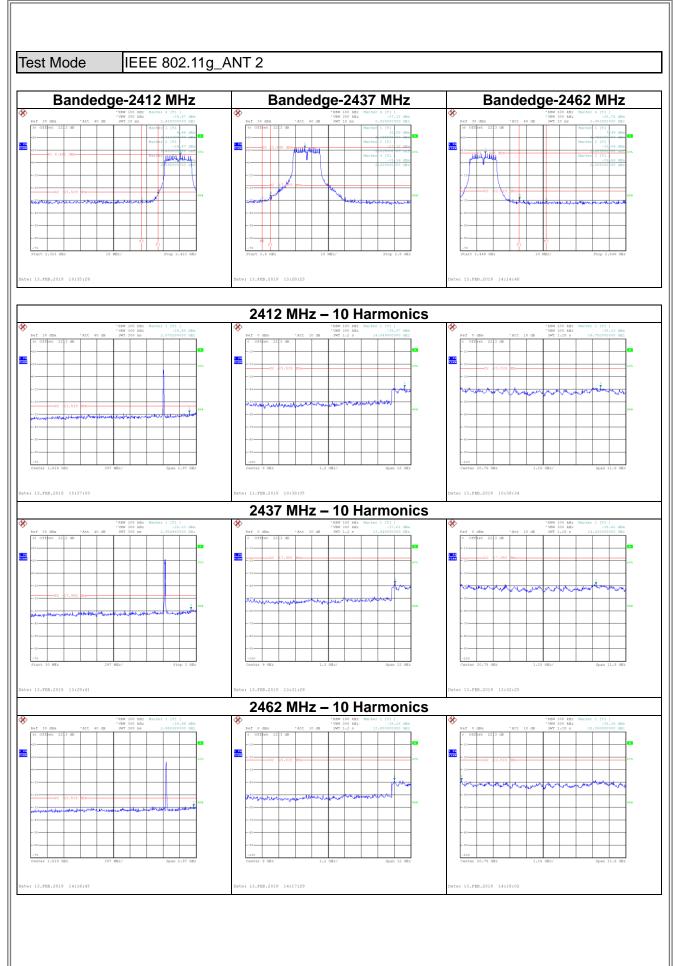




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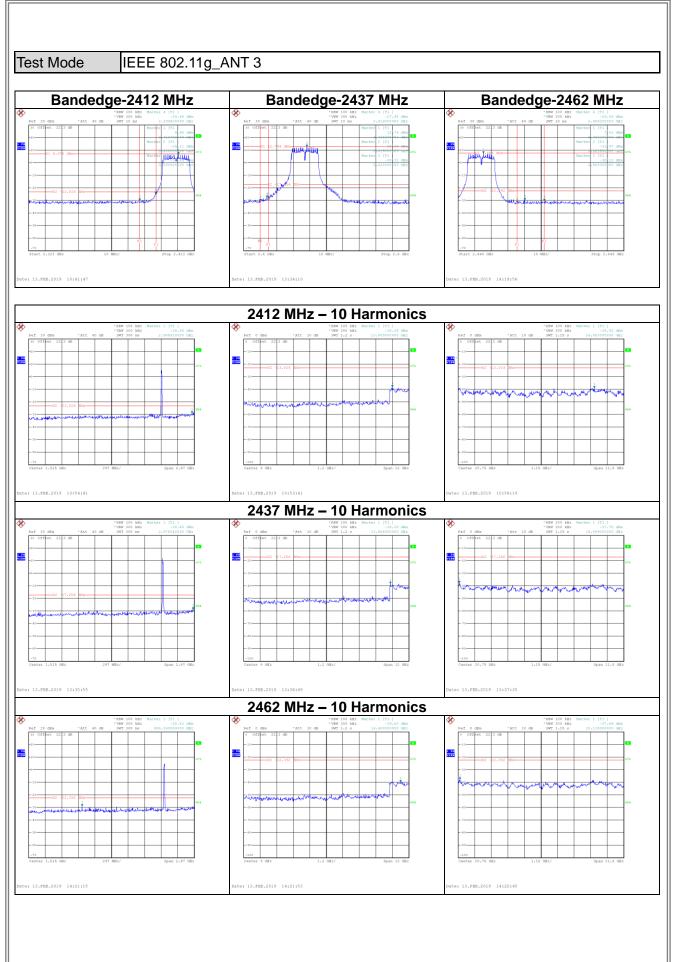




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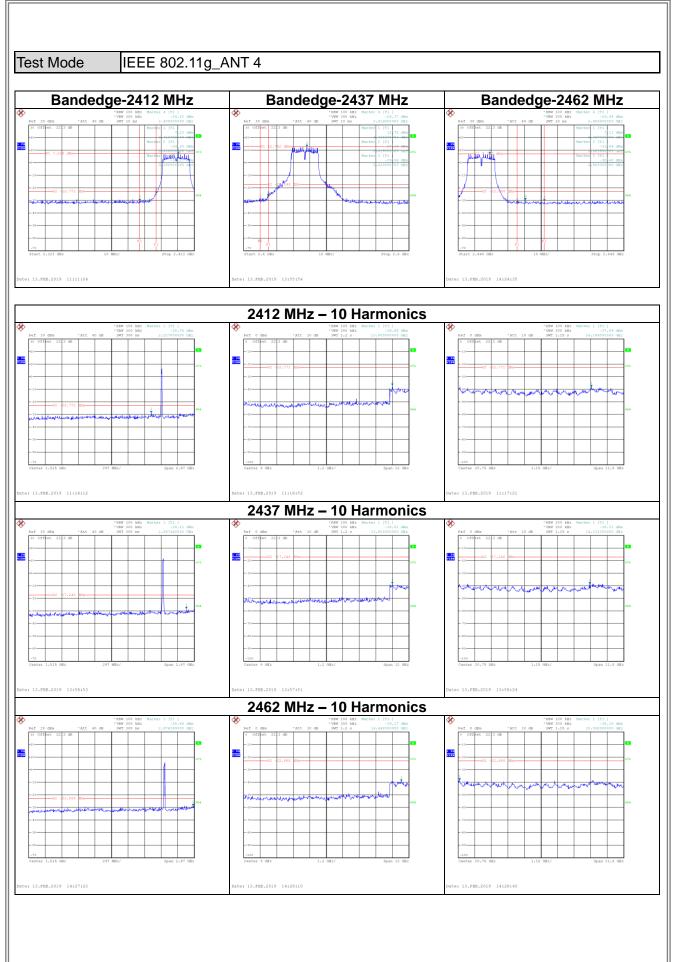




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