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FCC ID: TAPMD-TC6006W

### TEST REPORT

The following sample(s) was/were submitted and identified on behalf of the client as:

Application No.:	GZEM1607004480CR
Applicant:	Guangdong MD Consumer Electric Manufacturing Co., Ltd
FCC ID:	TAPMD-TC6006W
Product Description:	Slow cooker
Model No.:	SCW3000S, MD-TC6006W *
*	Please refer to section 3 of this report for further details.
Trade Mark:	Black & Decker; MIDEA
Standards:	CFR 47 FCC PART 15 SUBPART C:2015 section 15.247
Date of Receipt:	2016-07-04
Date of Test:	2016-07-15 to 2016-07-18
Date of Issue:	2016-07-29
Test Result :	Pass*

<sup>\*</sup> In the configuration tested, the EUT detailed in this report complied with the standards specified above.



The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government. All test results in this report can be traceable to National or International Standards.

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### 2 Version

hapter			
партег	Date	Modifier	Remark
	2016-07-29		Original Report
		2016-07-29	2016-07-29

Authorized for issue by:		
Tested By	(Vico Cui) /Project Engineer	2016-07-15 to 2016-07-18  Date
Prepared By	Sandy Zheng	2016-07-25
	(Sandy Zheng) / Clerk	Date
Checked By	Little Xiang	2016-07-26
	(Little Xiang) / Reviewer	Date



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### 3 Test Summary

Test	Test Requirement	Test method	Uncertainty	Result
Antenna Requirement	FCC PART 15 C section 15.247 (c) and Section 15.203	FCC PART 15 C section 15.247 (c) and Section 15.203	NA	PASS
6 dB Bandwidth	FCC PART 15 C section 15.247 (a)(2)	ANSI C63.10: Clause 11.8	± 5 %	PASS
Maximum Peak Output Power	FCC PART 15 C section 15.247(b)(3)	ANSI C63.10: Clause 11.9	± 1.5dB	PASS
Peak Power Spectral Density	FCC PART 15 C section 15.247(e)	ANSI C63.10: Clause 11.10	± 3dB	PASS
Conducted Spurious Emission (30MHz to 25GHz)	FCC PART 15 C section 15.209 &15.247(d)	ANSI C63.10: Clause 11.11	± 1.5dB	PASS
Radiated Spurious Emission 30 MHz to 25 GHz)	FCC PART 15 C section 15.209 &15.247(d)	ANSI C63.10: Clause 11.12,6.3,6.5 and 6.6	±3dB	PASS
Band Edges Measurement	FCC PART 15 C section 15.247 (d) &15.205	ANSI C63.10: Clause 11.13	± 1.5dB	PASS
Conducted Emissions at Mains Terminals	FCC PART 15 C section 15.207	ANSI C63.10: Clause 6.2	± 1.5dB	PASS

#### Remark:

EUT: In this whole report EUT means Equipment Under Test. N/A: not applicable. Refer to the relative section for the details.

Tx: In this whole report Tx (or tx) means Transmitter. Rx: In this whole report Rx (or rx) means Receiver. RF: In this whole report RF means Radio Frequency.

ANSI C63.10: the detail version is ANSI C63.10:2013 in the whole report.

#### \* Model No.: SCW3000S, MD-TC6006W

According to the declaration from the applicant, the electrical circuit design, layout, components used and internal wiring were identical for all models, with only difference being the model name.

Therefore only one model MD-TC6006W was tested in this report.



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### 5 General Information

### 5.1 Client Information

Applicant: Guangdong MD Consumer Electric Manufacturing Co., Ltd
Address of Applicant: 19 Sanle Road, Beijiao, Shunde, Foshan, Guangdong, China

### 5.2 General Description of E.U.T.

Product Description: Slow cooker

Model No.: MD-TC6006W

5.3 Details of E.U.T.

Transmit Data Rate:

Operating Frequency 2412 MHz to 2462 MHz for 802.11b/g/n(HT20)

2422 MHz to 2452 MHz for 802.11n(HT40)

802.11b: DSSS(CCK/QPSK/BPSK)

Type of Modulation: 802.11g: OFDM(BPSK/QPSK/16QAM/64QAM)

802.11n: MIMO OFDM (BPSK/QPSK/16QAM/64QAM)

802.11b :1/2/5.5/11 Mbps

802.11g :6/9/12/18/24/36/48/54 Mbps

802.11n(HT20): 7.2/14.4/21.7/28.9/43.3/57.8/65/72.2 Mbps

802.11n(HT40): 15/30/45/60/90/120/135/150 Mbps

Number of Channels 11 Channels for 802.11b/g/n(HT20)

7 Channels for 802.11n(HT40)

Channel Separation: 5 MHz

Antenna Type integrated antenna

Antenna gain: 2.0 dBi

Function: Wireless Wi-Fi for cooking

Test Software: Artgui

Power Supply: AC 120V, 60Hz



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### 5.4 Description of Support Units

The EUT has been tested with corresponding accessories as below:

Supplied by SGS:

Description	Manufacturer	Model No.	SN/Certificate NO
NoteBook	IBM	T40	99-FBAF9 03/09
Router	TP-LINK	TL-WR841N	9727201635

Using the special software and development board we can enter the product for engineer mode then we can control the EUT to select the wanted channel for test. The test board and PC are only to configure the engineer mode and not used to final test.

#### 5.5 Deviation from Standards

Biconical and log periodic antennas were used instead of dipole antennas.

#### 5.6 Abnormalities from Standard Conditions

None.

### 5.7 Other Information Requested by the Customer

None.

#### 5.8 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory, 198 Kezhu Road, Scientech Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.



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### 5.9 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

### • NVLAP (Lab Code: 200611-0)

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

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

#### ACMA

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.

### • SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

### CNAS (Lab Code: L0167)

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2006 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.

### • FCC (Registration No.: 282399)

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 282399, May 31, 2002.

#### Industry Canada (Registration No.: 4620B-1)

The 3m/10m Alternate Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Certification and Engineering of Industry Canada for radio equipment testing with Registration No. 4620B-1.

#### VCCI (Registration No.: R-2460, C-2584, G-449 and T-1179)

The 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co. Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2460, C-2584, G-449 and T-1179 respectively.

### • CBTL (Lab Code: TL129)

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2005, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.



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### 6 Equipment List

RE in Cha	RE in Chamber					
N.	T				Cal. date	Cal.Due date
No.	Test Equipment	Manufacturer	Model No.	Serial No.	(YYYY-MM-DD)	(YYYY-MM-DD)
EMC0525	Compact Semi- Anechoic Chamber	ChangZhou ZhongYu	N/A	N/A	2014-12-05	2016-12-04
EMC0522	EMI Test Receiver	Rohde & Schwarz	ESIB26	100283	2016-02-01	2017-01-31
EMC0056	EMI Test Receiver	Rohde & Schwarz	ESCI	100236	2016-02-01	2017-01-31
EMC0528	RI High frequency Cable	SGS	20 m	N/A	2016-04-19	2018-04-18
EMC2025	Trilog Broadband Antenna 30-1000MHz	SCHWARZBECK MESS- ELEKTRONIK	VULB 9160	9160-3372	2014-07-14	2017-07-13
EMC0524	Bi-log Type Antenna	Schaffner -Chase	CBL6112B	2966	2013-08-31	2016-08-30
EMC0519	Bilog Type Antenna	Schaffner -Chase	CBL6143	5070	2014-05-04	2017-05-03
EMC2026	Horn Antenna 1-18GHz	SCHWARZBECK MESS- ELEKTRONIK	BBHA 9120D	9120D-841	2013-08-31	2016-08-30
EMC0521	1-26.5 GHz Pre-Amplifier	Agilent	8449B	3008A01649	2016-01-25	2017-01-24
EMC2065	Amplifier	HP	8447F	N/A	2016-07-04	2017-07-03
EMC2086	PRE AMPLIFIER MH648A	ANRITSU CORP	MH648A	N/A	2015-12-19	2016-12-18
EMC2063	Pre-amplifier 1GHz- 26GHz	Compliance Direction Systems Lnc.	PAP-1G26-48	6279.628	2016-01-06	2017-01-05
EMC0523	Active Loop Antenna	EMCO	6502	42963	2016-02-27	2018-02-26
EMC2041	Broad-Band Horn Antenna (14)15-26.5(40)GHz	SCHWARZBECK MESS- ELEKTRONI	BBHA 9170	9170-375	2014-05-26	2017-05-25
EMC2079	High Pass Filter(915MHz)	FSY MICROWAVE	HM1465-9SS	009	2016-01-25	2017-01-24
EMC2069	2.4GHz Filter	Micro-Tronics	BRM 50702	149	2016-01-25	2017-01-24
EMC0530	10m Semi- Anechoic Chamber	ETS	N/A	N/A	2016-04-30	2018-04-29



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Conducte	Conducted Emission					
No.	To at Employment	Manuelantunan	Model No.	Osviel Ne	Cal. date	Cal.Due date
NO.	Test Equipment	Manufacturer	woder No.	Serial No.	(YYYY-MM-DD)	(YYYY-MM-DD)
EMC0306	Shielding Room	Zhong Yu	8 x 3 x 3.8 m <sup>3</sup>	N/A	N/A	N/A
EMC0118	Two-line v-netwok	R&S	ENV216	100359	2016-01-25	2017-01-24
EMC0102	LISN	SCHAFFNER CHASE	MN2050D/1	1421	2015-09-24	2016-09-23
EMC0506	EMI Test Receiver	Rohde & Schwarz	ESCS30	100085	2015-12-19	2016-12-18
EMC0107	Coaxial Cable	SGS	2m	N/A	2016-07-24	2018-07-23
EMC0106	Voltage Probe	SGS	N/A	N/A	2016-04-05	2018-04-04
EMC0120	8 Line ISN	Fischer Custom Communications	FCC-TLISN-T8- 02	20550	2015-09-28	2016-09-27
EMC0121	4 Line ISN	Fischer Custom Communications	FCC-TLISN-T4- 02	20549	2015-09-28	2016-09-27
EMC0122	2 Line ISN	Fischer Custom Communications	FCC-TLISN-T2- 02	20548	2015-09-28	2016-09-27
EMC2047	CDN	Elektronik- Feinmechanik	L-801:AF2	2793	2015-09-19	2018-09-18
EMC2048	CDN	Elektronik- Feinmechanik	L-801:M2/M3	2738	2015-09-25	2018-09-24
EMC2062	6dB Attenuator	HP	8491A	24487	2016-04-05	2018-04-04
EMC0167	Conical metal housing	SGS-EMC	N/A	N/A	2016-04-19	2018-04-18

General used equipment						
No.	No. Test Equipment Manufacturer Model No. Serial No.		Cal. date	Cal.Due date		
NO.	rest Equipment	Maridiacturei	wiodei No.	Serial No.	(YYYY-MM-DD)	(YYYY-MM-DD)
EMC0006	DMM	Fluke	73	70681569	2015-09-17	2016-09-16
EMC0007	DMM	Fluke	73	70671122	2015-09-17	2016-09-16



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### 7 Test Results

#### 7.1 E.U.T. test conditions

Temperature:

**Test Voltage:** DC 120V, 60Hz

20.0 -25.0 °C

Humidity: 38-50 % RH

Atmospheric Pressure: 1000 -1010 mbar

**Requirements:** 15.31(e): For intentional radiators, measurements of the variation of

the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. For battery operated equipment, the

equipment tests shall be performed using a new battery.

**15.32:** Power supplies and CPU boards used with personal computers and for which separate authorizations are required to be obtained shall

be tested as follows: Testing shall be in accordance with the

procedures specified in Section 15.31 of this part.

Test frequencies and frequency range:

According to the 15.31(m) Measurements on intentional radiators or receivers, other than TV broadcast receivers, shall be performed and, if required, reported for each band in which the device can be operated with the device operating at the number of frequencies in each band specified in the following table:

According to the 15.33 (a) For an intentional radiator, the spectrum shall be investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to at least the frequency shown in the following table:



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### Number of fundamental frequencies to be tested in EUT transmit band

Frequency range in which	Number of	Location in frequency range
device operates	frequencies	of operation
1 MHz or less	1	Middle
1 MHz to 10 MHz	2	1 near top and 1 near bottom
More then 10 MHz	2	1 near top, 1 near middle and 1
More than 10 MHz	3	near bottom

### Frequency range of radiated emission measurements

Lowest frequency generated in the device	Upper frequency range of measurement
9 kHz to below 10 GHz	10th harmonic of highest fundamental frequency or to 40 GHz,
9 KHZ to below 10 GHZ	whichever is lower
At or above 10 GHz to below	5th harmonic of highest fundamental frequency or to 100 GHz,
30 GHz	whichever is lower
At or above 30 GHz	5th harmonic of highest fundamental frequency or to 200 GHz,
At or above 30 GHZ	whichever is lower, unless otherwise specified



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### **EUT channels and frequencies list:**

1. Test frequencies are lowest channel: 2412 MHz, middle channel: 2442 MHz and highest channel: 2462 MHz for 802.11b/g/n(HT20)

Channel	Frequency (MHz)
1	2412
2	2417
3	2422
4	2427
5	2432
6	2437
7	2442
8	2447
9	2452
10	2457
11	2462

2. Test frequencies are lowest channel: 2422 MHz, middle channel: 2442 MHz and highest channel: 2452 MHz for 802.11n(HT40)

Channel	Frequency (MHz)		
3	2422		
4	2427		
5	2432		
6	2437		
7	2442		
8	2447		
9	2452		

3. Using the special software we can enter the product for engineer mode then we can control the EUT to select the wanted channel for test as above list.



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### 7.2 Antenna Requirement

### Standard requirement

15.203 requirement:

For intentional device. According to 15.203. an intentional radiator shall be designed to Ensure that no antenna other than that furnished by the responsible party shall be used with the device.

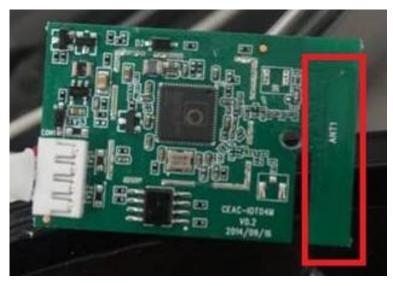
15.247(c) (1)(i) requirement:

(i) Systems operating in the 2400-2483.5 MHz bands that are used exclusively for fixed.

Point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

#### **EUT Antenna**

The antenna is an integral and no consideration of replacement. The best case gain of the antenna is 2.0 dBi.



Test result: The unit does meet the FCC requirements.



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#### 7.3 6 dB Bandwidth

Test Requirement: FCC Part 15 C section 15.247

(a)(2)Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5MHz, and 5725-5850 MHz bands. The

minimum 6 dB bandwidth shall be at least 500 kHz.

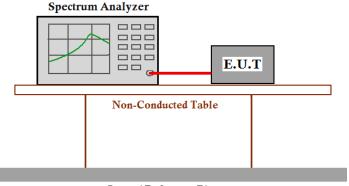
Test Method: ANSI C63.10: Clause 11.8

Test Status: Pre-Scan has been conducted to determine the worst-case mode from

all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed

below.

#### **Test Configuration:**



### Ground Reference Plane

#### Test Procedure:

- 1. Remove the antenna from the EUT and then connect a low attention attenuation RF cable (cable loss =1.5dB) from the antenna port to the spectrum.
- 2. Set the spectrum analyzer: RBW=100 kHz. VBW = 300 kHz. Sweep = auto; Detector Function = Peak. Trace = Max Hold, Set span to encompass the entire emission bandwidth of the signal..
- 3. Mark the peak power frequency and -6dB (upper and lower) power frequency.
- 4. Repeat until all the test status is investigated.
- 5. Report the worse case.



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Channel No.	Frequency (MHz)	Mode	Data Rate	Measured 6dB bandwidth (MHz)	Limit	Result
1	2412		11 Mbps	9.819	≥500KHz	Pass
7	2442	802.11b	11 Mbps	10.320		Pass
11	2462		11 Mbps	10.120		Pass
1	2412		54 Mbps	16.633	≥500KHz	Pass
7	2442	802.11g	54 Mbps	16.733		Pass
11	2462		54 Mbps	16.733		Pass
1	2412	900 11n	65 Mbps	17.935	≥500KHz	Pass
7	2442	802.11n	65 Mbps	17.935		Pass
11	2462	(HT20)	65 Mbps	17.935		Pass
3	2422	900 115	135Mbps	36.713		Pass
7	2442	802.11n	135Mbps	36.673	≥500KHz	Pass
9	2452	(HT40)	135Mbps	37.074		Pass

Test result: The unit does meet the FCC requirements.



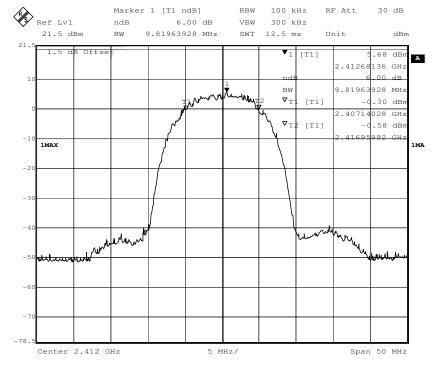
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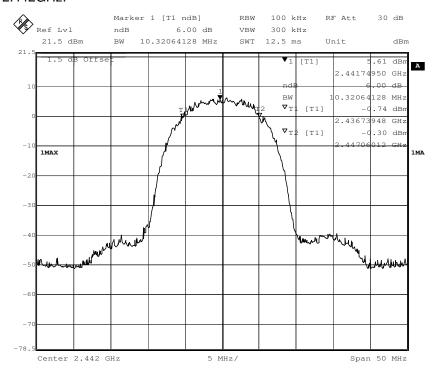
### Result plot as follows:

### 802.11b mode with 11Mbps data rate

### Channel 1: 2.412GHz:



### Channel 7: 2.442GHz:

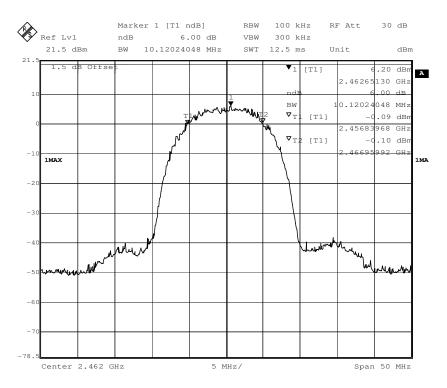




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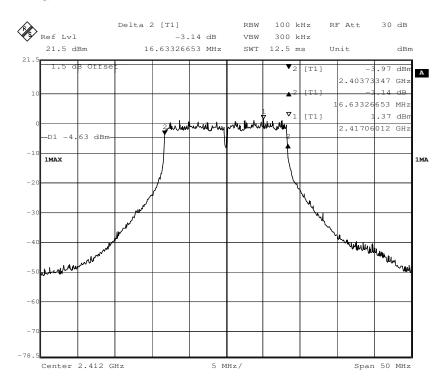
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#### Channel 11: 2.462GHz:



### 802.11g mode with 54Mbps data rate

#### Channel 1: 2.412GHz:

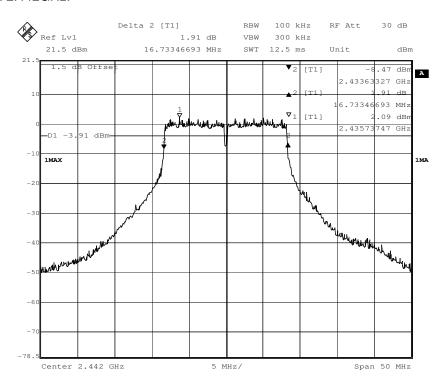




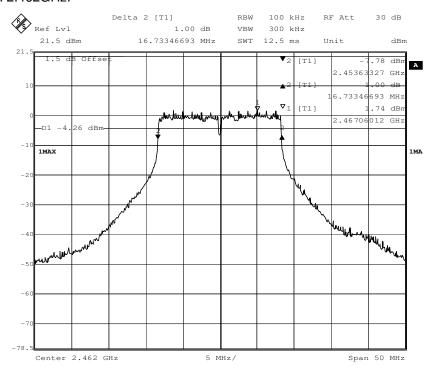
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#### Channel 7: 2.442GHz:



### Channel 11: 2.462GHz:



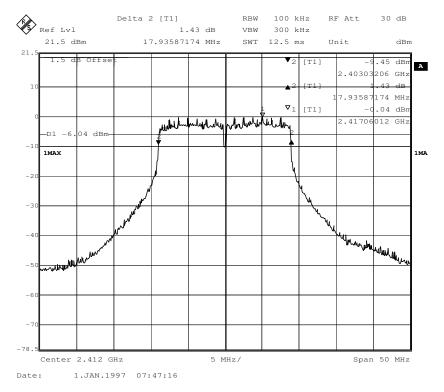


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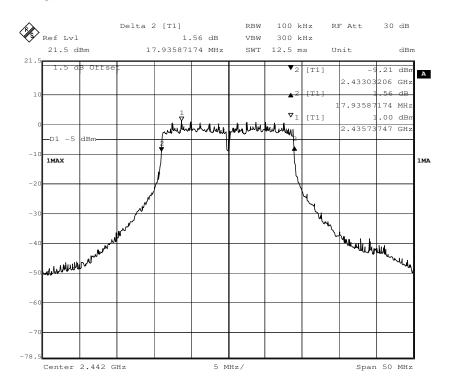
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### 802.11n(HT20) mode with 72.2Mbps data rate

### Channel 1: 2.412GHz:



#### Channel 7: 2.442GHz:

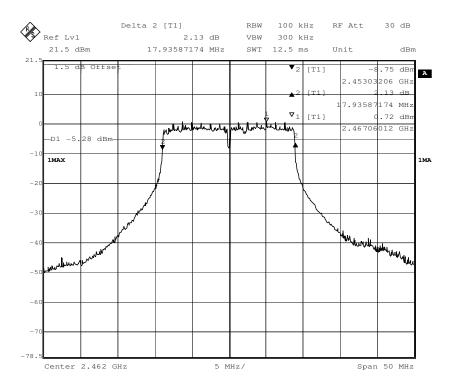




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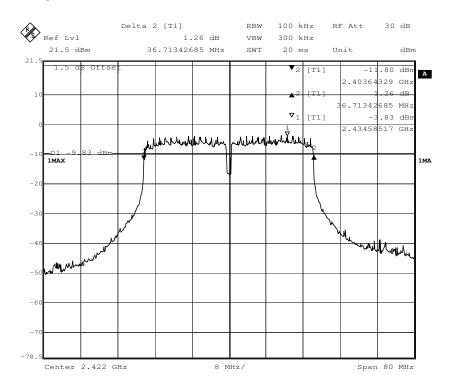
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#### Channel 11: 2.462GHz:



### 802.11n(HT40) mode with 150Mbps data rate

#### Channel 3: 2.422GHz:

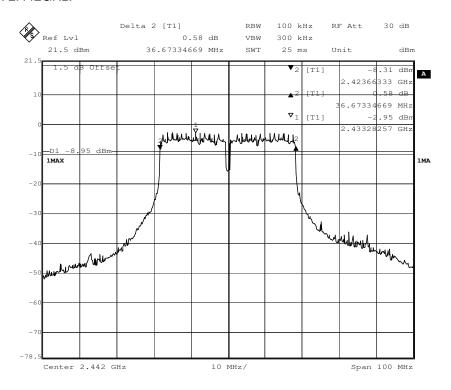




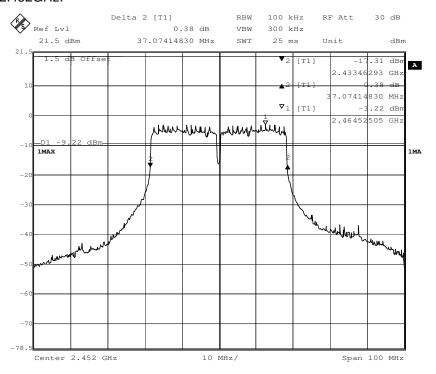
Report No.: GZEM160700448001

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#### Channel 7: 2.442GHz:



### Channel 9: 2.452GHz:





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### 7.4 Maximum Peak Output Power

Test Requirement: FCC Part 15 C section 15.247

(b)(3) For systems using digital modulation in the 902-928 MHz,

2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt.

Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b) (1), (b) (2), and (b) (3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna

exceeds 6 dBi.

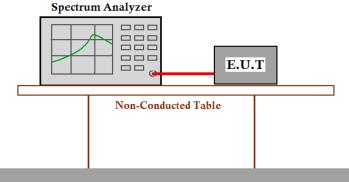
Test Method: ANSI C63.10: Clause 11.9

Test Status: Pre-Scan has been conducted to determine the worst-case mode from

all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed

below.

**Test Configuration:** 





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#### Test Procedure:

- Remove the antenna from the EUT and then connect a low attention attenuation RF cable
   (Cable loss =1.0dB) from the antenna port to the spectrum.
- 2. Set the RBW=1MHz
- 3. Set the VBW ≥ 3 x RBW
- 4. Set the span ≥1.5 x DTS bandwidth
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the instrument's band/channel power measurement function with the band limits set equal to the DTS bandwidth edges (for some instruments, this may require a manual override to select peak detector). If the instrument does not have a band power function, sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the DTS bandwidth.
- 10. Measure the channel power of the test frequency with special test status.
- 11. Repeat until all the test status is investigated and report the worse case.



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#### Test result:

Channel No.	Frequency (MHz)	Mode	Data Rate	Measured Channel Power (dBm)	Limit	Result
1	2412		11 Mbps	20.91		Pass
7	2442	802.11b	11 Mbps	22.03	1W(30dBm)	Pass
11	2462		11 Mbps	21.50		Pass
1	2412	802.11g	54 Mbps	20.19		Pass
7	2442		54 Mbps	21.20		Pass
11	2462		54 Mbps	21.27		Pass
1	2412	802.11n (HT20)	65 Mbps	19.40		Pass
7	2442		65 Mbps	20.12		Pass
11	2462		65 Mbps	19.66	-	Pass
3	2422	802.11n (HT40)	135Mbps	18.87		Pass
7	2442		135Mbps	19.62		Pass
9	2452		135Mbps	18.11		Pass

Remark: Level = Read Level + Cable Loss The unit does meet the FCC requirements.



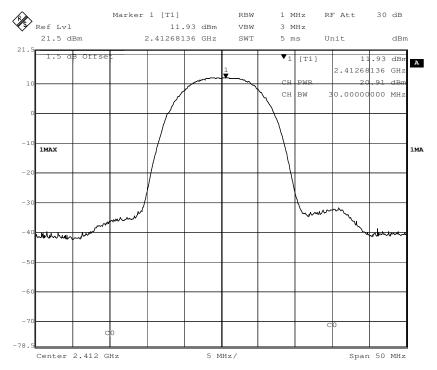
Report No.: GZEM160700448001

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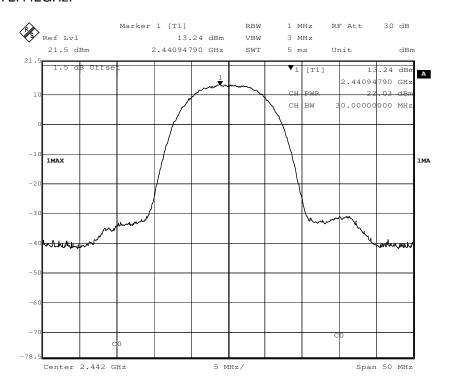
### Result plot as follows:

### 802.11b mode with 11Mbps data rate

### Channel 1: 2.412GHz:



### Channel 7: 2.442GHz:

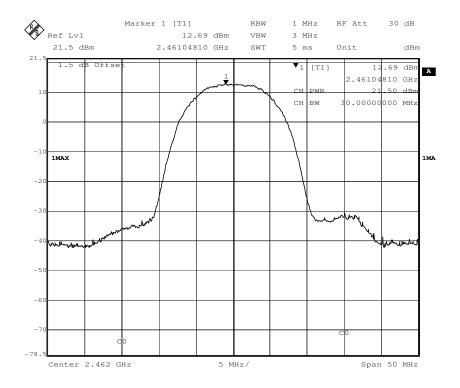




Report No.: GZEM160700448001

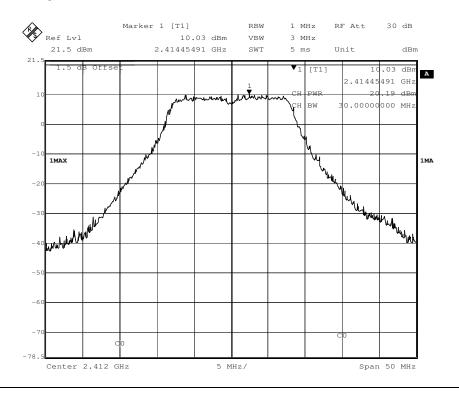
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#### Channel 11: 2.462GHz:



### 802.11g mode with 54Mbps data rate

### Channel 1: 2.412GHz:

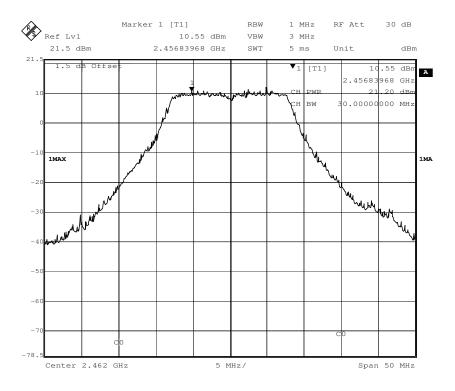




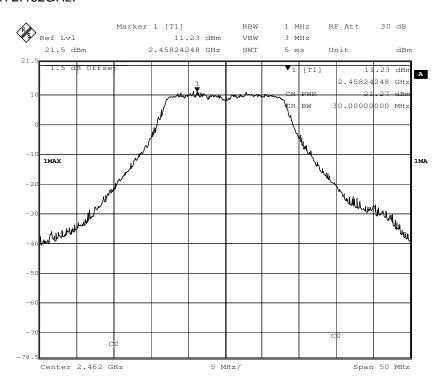
Report No.: GZEM160700448001

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#### Channel 7: 2.442GHz:



### Channel 11: 2.462GHz:



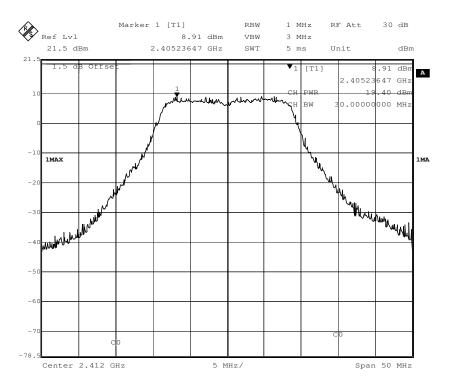


Report No.: GZEM160700448001

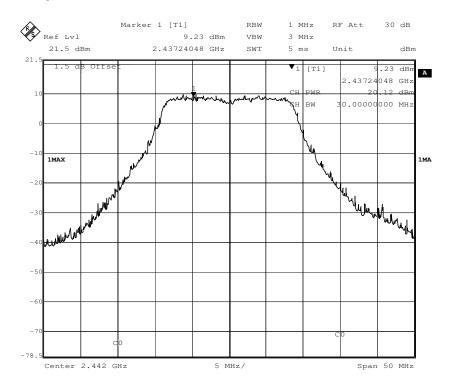
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### 802.11n(HT20) mode with 72.2Mbps data rate

### Channel 1: 2.412GHz:



#### Channel 7: 2.442GHz:

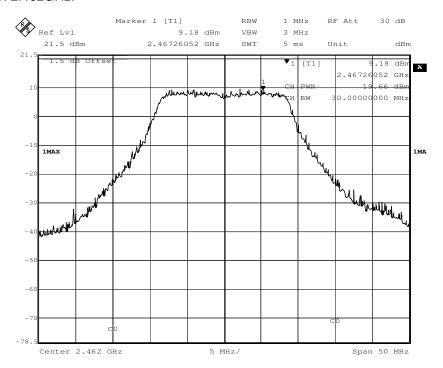




Report No.: GZEM160700448001

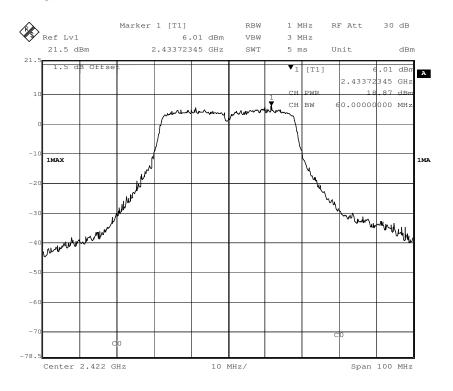
Page: 29 of 116 FCC ID: TAPMD-TC6006W

#### Channel 11: 2.462GHz:



### 802.11n(HT40) mode with 150Mbps data rate

#### Channel 3: 2.422GHz:

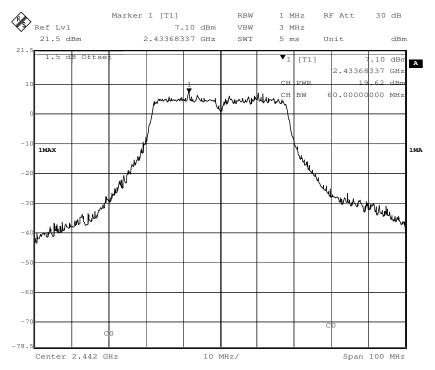




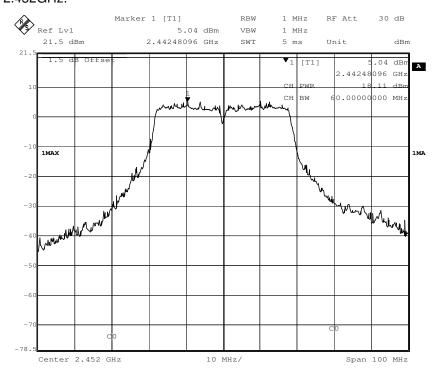
Report No.: GZEM160700448001

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#### Channel 7: 2.442GHz:



### Channel 9: 2.452GHz:





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### 7.5 Peak Power Spectral Density

Test Requirement: FCC Part 15 C section 15.247

(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the

power spectral density.

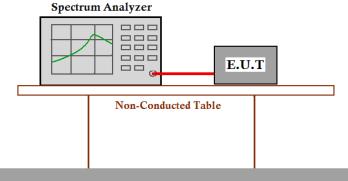
Test Method: ANSI C63.10: Clause 11.10

Test Status: Pre-Scan has been conducted to determine the worst-case mode from

all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed

below.

Test Configuration:





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#### Test Procedure:

- 1. Remove the antenna from the EUT and then connect a low attention attenuation RF cable (cable loss =1.5dB) from the antenna port to the spectrum analyzer or power meter.
- 2. Set the spectrum analyzer: RBW=3 kHz. VBW = 30 kHz. sweep= (SPAN/3 kHz); Detector Function = Peak. Trace = Max Hold, Centre = the Peak Power of the signal.
- 3. Measure the Power Spectral Density of the test frequency with special test status.
- 4. Repeat until all the test status is investigated.
- 5. Report the worse case.



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	I			T	I	
Channel	Frequency			Measured Peak Power		
		Mode	Data Rate	Spectral Density	Limit	Result
No.	(MHz)			(dBm/3KHz)		
1	2412	802.11b	11 Mbps	-11.25		Pass
7	2442		11 Mbps	-10.07		Pass
11	2462		11 Mbps	-10.52	- 8dBm/3KHz	Pass
1	2412	802.11g	54 Mbps	-21.35		Pass
7	2442		54 Mbps	-20.03		Pass
11	2462		54 Mbps	-19.09		Pass
1	2412	802.11n (HT20)	65 Mbps	-22.30		Pass
7	2442		65 Mbps	-20.11		Pass
11	2462		65 Mbps	-21.69		Pass
3	2422	802.11n (HT40)	135 Mbps	-26.92		Pass
7	2442		135 Mbps	-23.29		Pass
9	2452		135 Mbps	-28.58		Pass

Test result: Level = Read Level + Cable Loss. The unit does meet the FCC requirements.



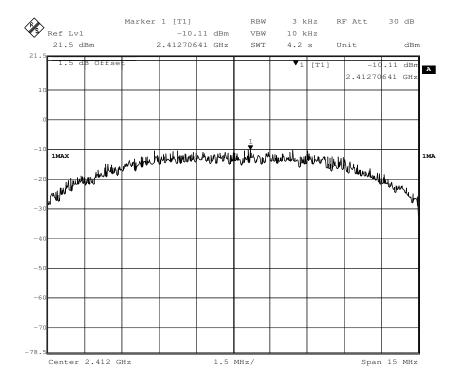
Report No.: GZEM160700448001

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### Result plot as follows:

### 802.11b mode with 11Mbps data rate

Channel 1: 2.412GHz:

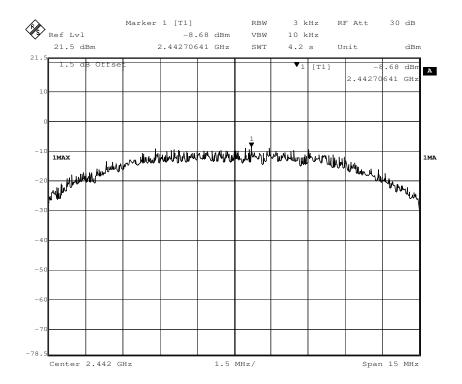




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#### Channel 7: 2.442GHz:

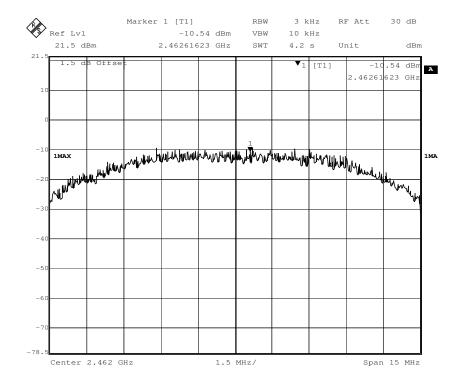




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#### Channel 11: 2.462GHz:



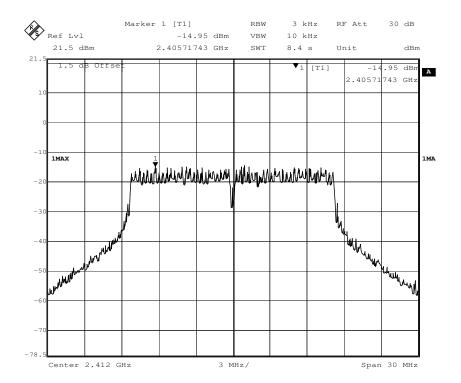


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## 802.11g mode with 54Mbps data rate

Channel 1: 2.412GHz:

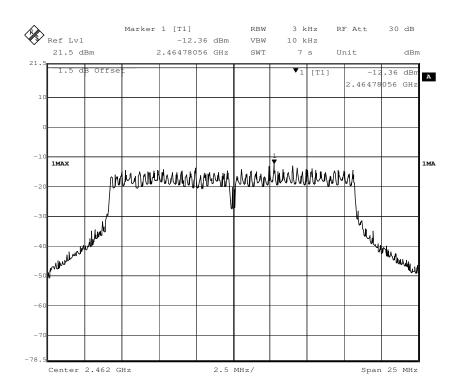




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### Channel 7: 2.442GHz:

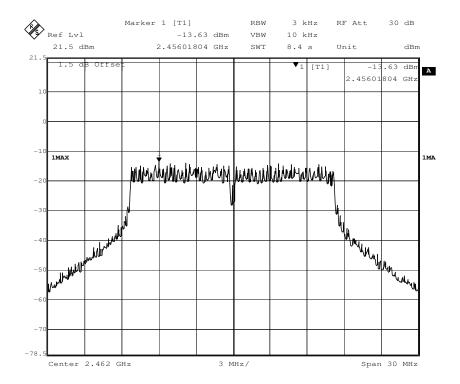




Report No.: GZEM160700448001

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### Channel 11: 2.462GHz:



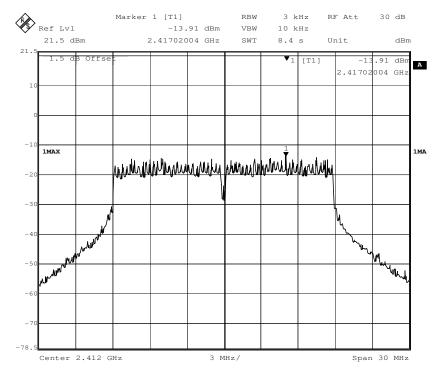


Report No.: GZEM160700448001

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## 802.11n(HT20) mode with 72.2Mbps data rate

## Channel 1: 2.412GHz:

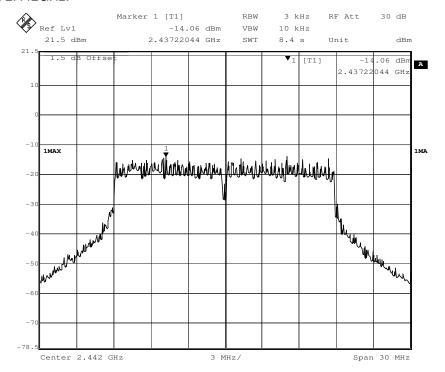




Report No.: GZEM160700448001

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### Channel 7: 2.442GHz:

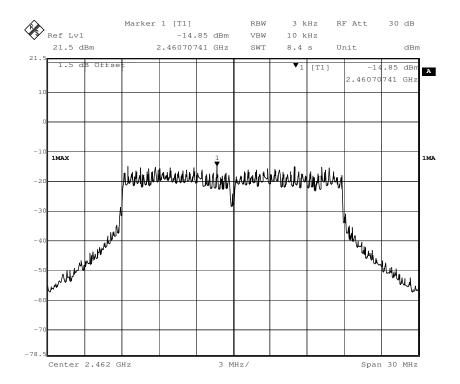




Report No.: GZEM160700448001

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### Channel 11: 2.462GHz:



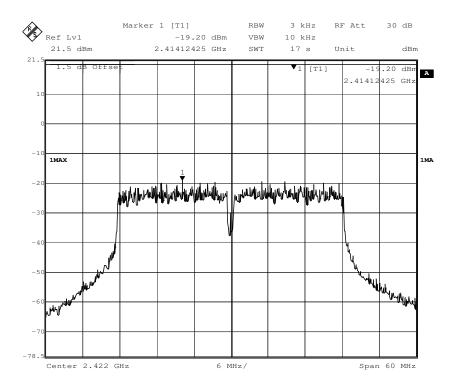


Report No.: GZEM160700448001

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## 802.11n(HT40) mode with 150Mbps data rate

Channel 3: 2.422GHz:

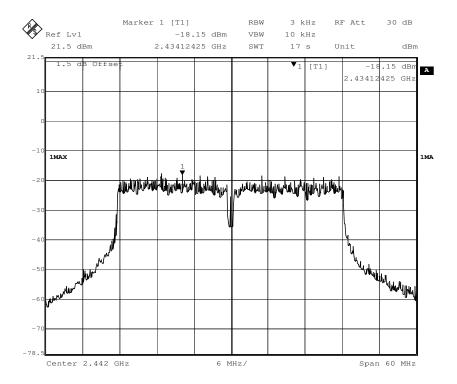




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### Channel 7: 2.442GHz:

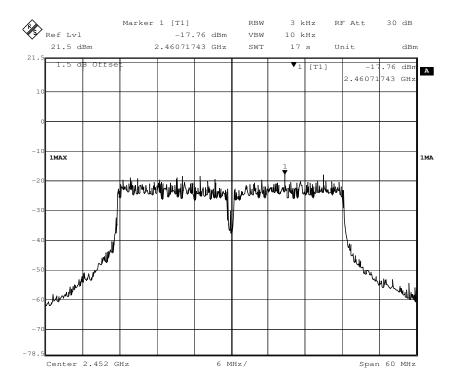




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### Channel 9: 2.452GHz:





Report No.: GZEM160700448001

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## 7.6 Conducted Spurious Emissions

Test Requirement: FCC Part 15 C section 15.247

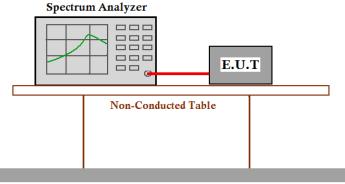
(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating. the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. Based on either an RF conducted or a radiated measurement. Provided the transmitter demonstrates compliance with the peak conducted power limits.

Test Method: ANSI C63.10: Clause 11.11

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all

possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

**Test Configuration:** 



Ground Reference Plane

#### Test Procedure:

- 1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum analyzer or power meter.
- 2. Set the spectrum analyzer: RBW=100 KHz, VBW = 300KHz. Sweep = auto; Detector Function = Peak. Trace = Max Hold, Scan up through 10th harmonic.
- 3. Measure the Conducted Spurious Emissions of the test frequency with special test status.
- 4. Repeat until all the test status is investigated.
- 5. Report the worse case.



Report No.: GZEM160700448001

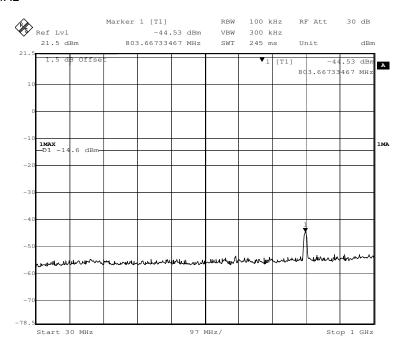
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## Result plot as follows:

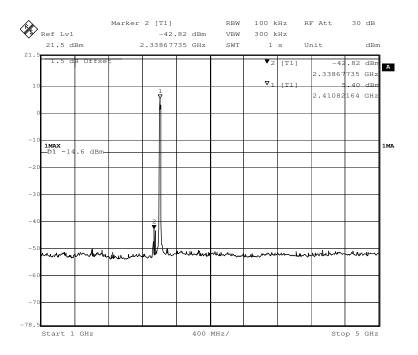
## 802.11b mode with 11Mbps data rate

Channel 1: 2.412GHz:

30 MHz to 1 GHz



### 1 G to 5 GHz

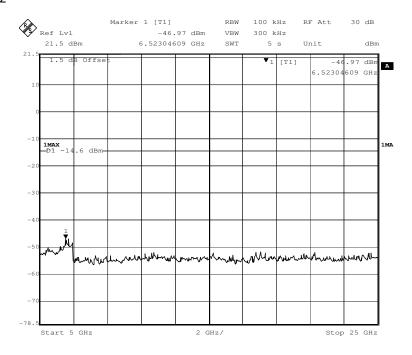




Report No.: GZEM160700448001

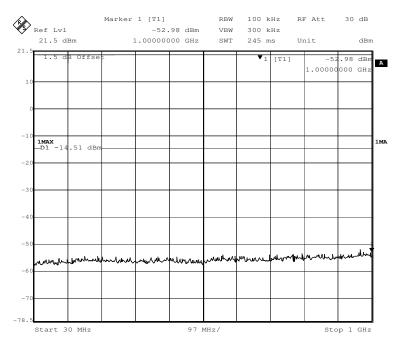
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### 5 G to 25 GHz



## Channel 7: 2.442GHz:

#### 30 MHz to 1 GHz

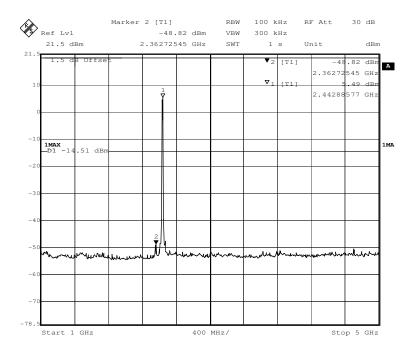




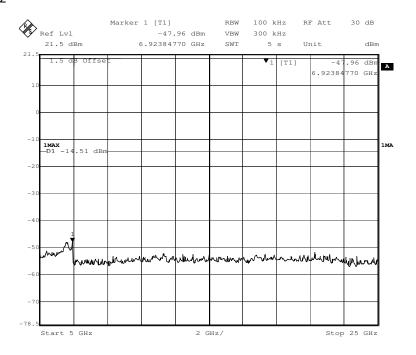
Report No.: GZEM160700448001

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### 1 G to 5 GHz



#### 5 G to 25 GHz



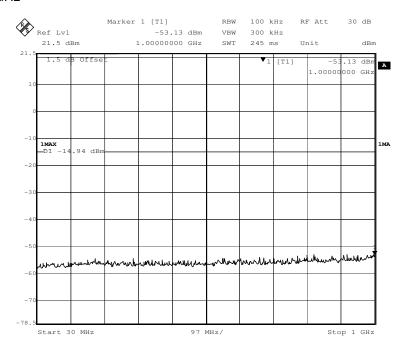


Report No.: GZEM160700448001

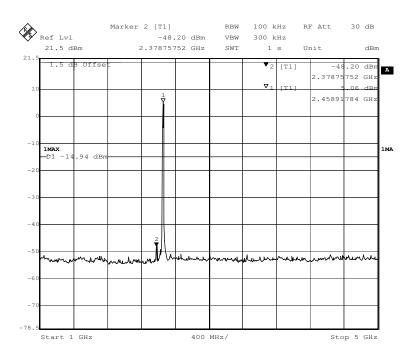
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### Channel 11:2.462 GHz

#### 30 MHz to 1 GHz



### 1 G to 5 GHz

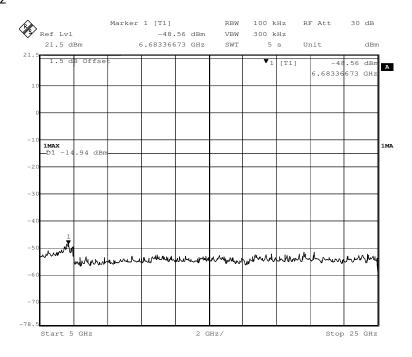




Report No.: GZEM160700448001

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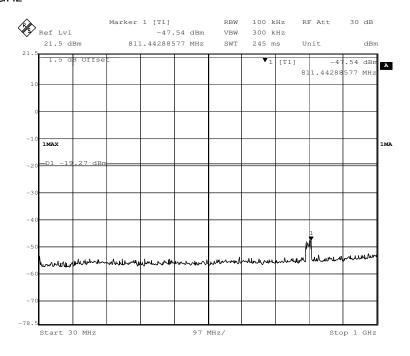
### 5 G to 25 GHz



## 802.11g mode with 54Mbps data rate

Channel 1: 2.412GHz:

30 MHz to 1 GHz

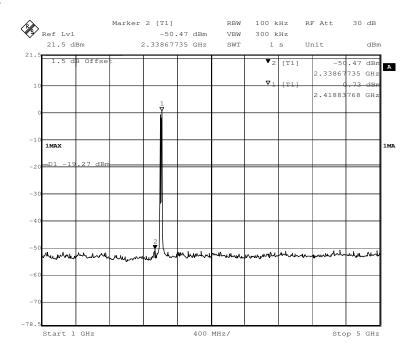




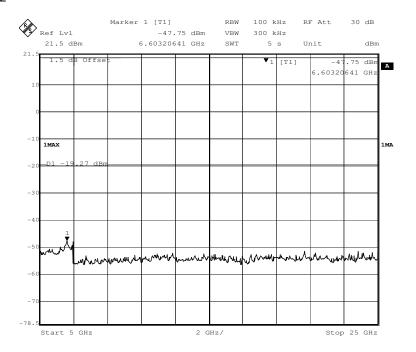
Report No.: GZEM160700448001

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### 1 G to 5 GHz



#### 5 G to 25 GHz



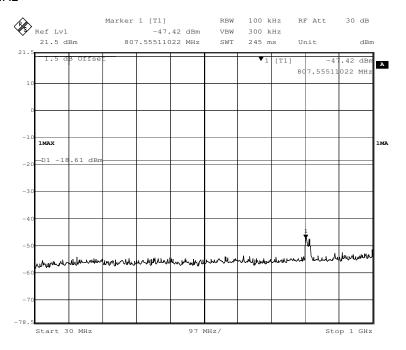


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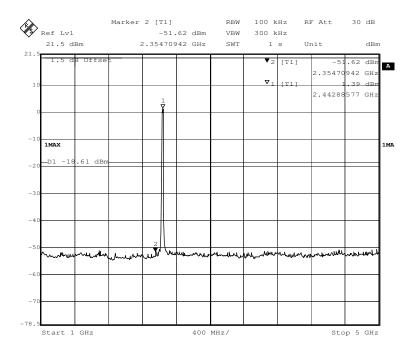
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### Channel 7: 2.442GHz:

#### 30 MHz to 1 GHz



### 1 G to 5 GHz

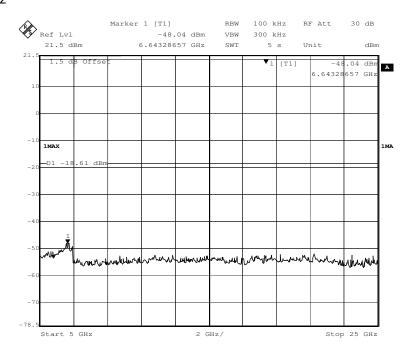




Report No.: GZEM160700448001

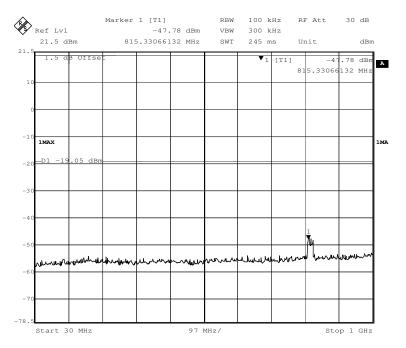
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### 5 G to 25 GHz



## Channel 11:2.462 GHz

#### 30 MHz to 1 GHz

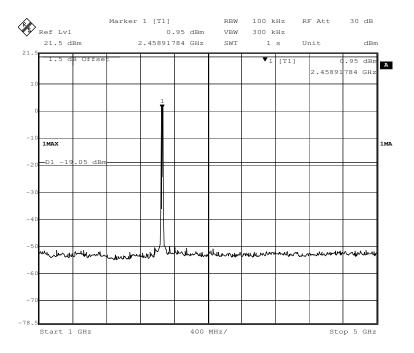




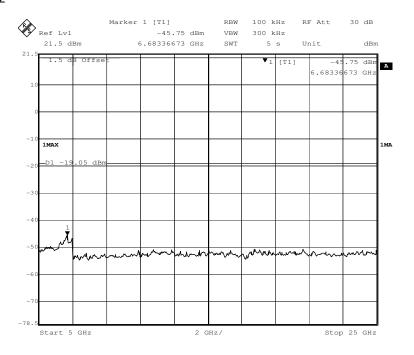
Report No.: GZEM160700448001

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### 1 G to 5 GHz



#### 5 G to 25 GHz





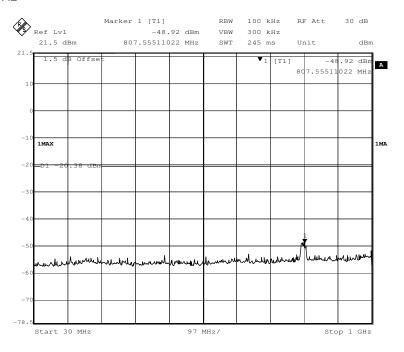
Report No.: GZEM160700448001

Page: 56 of 116 FCC ID: TAPMD-TC6006W

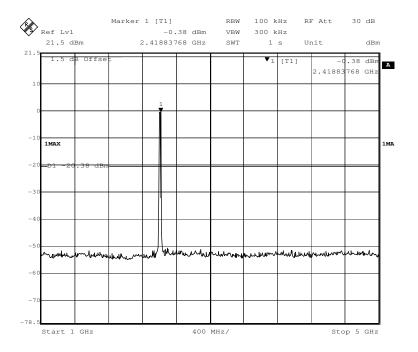
## 802.11n(HT20) mode with 72.2Mbps data rate

Channel 1: 2.412GHz:

30 MHz to 1 GHz



### 1 G to 5 GHz

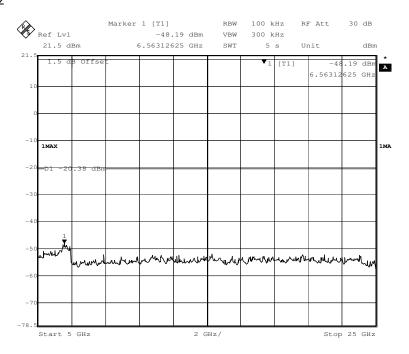




Report No.: GZEM160700448001

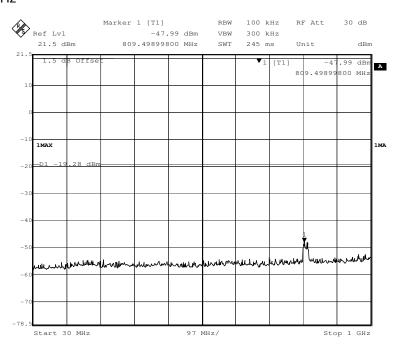
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### 5 G to 25 GHz



## Channel 7: 2.442GHz:

## 30 MHz to 1 GHz

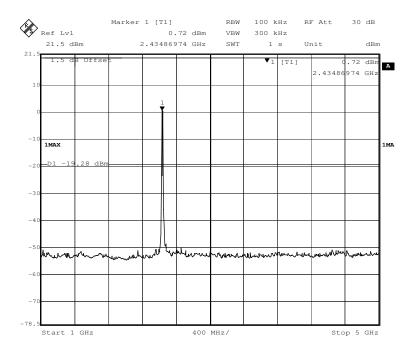




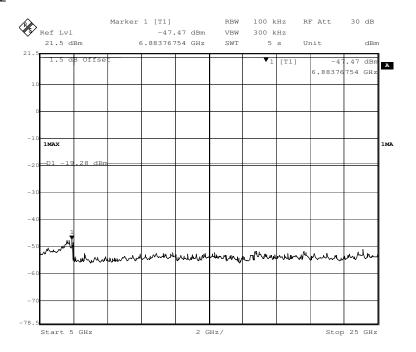
Report No.: GZEM160700448001

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### 1 G to 5 GHz



#### 5 G to 25 GHz



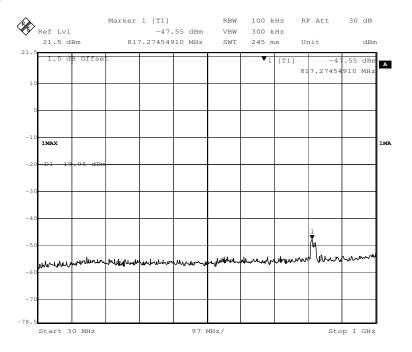


Report No.: GZEM160700448001

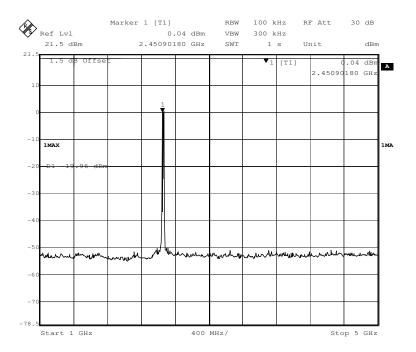
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### Channel 11:2.462 GHz

#### 30 MHz to 1 GHz



### 1 G to 5 GHz

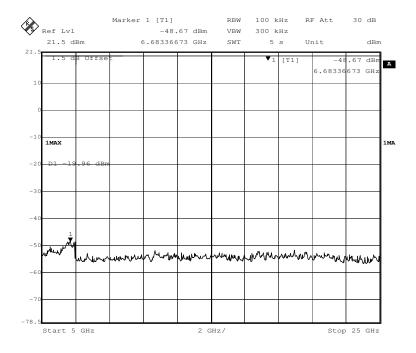




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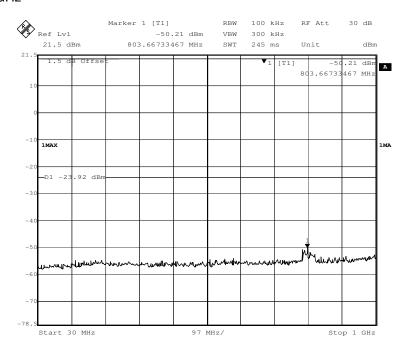
### 5 G to 25 GHz



## 802.11n(HT40) mode with 150Mbps data rate

Channel 3: 2.422GHz:

30 MHz to 1 GHz

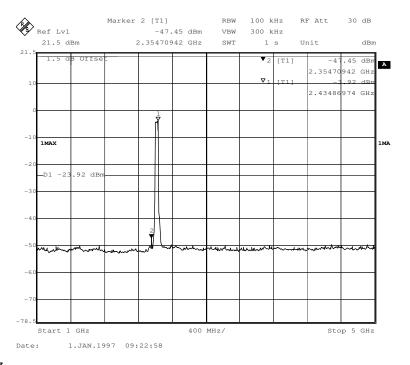




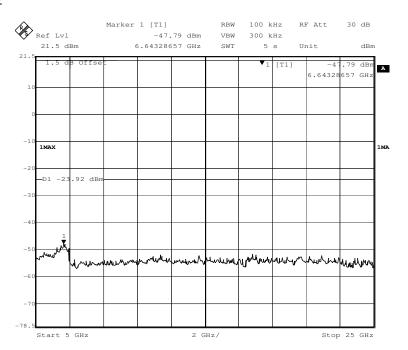
Report No.: GZEM160700448001

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### 1 G to 5 GHz



#### 5 G to 25 GHz



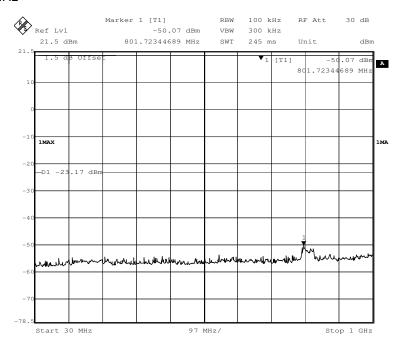


Report No.: GZEM160700448001

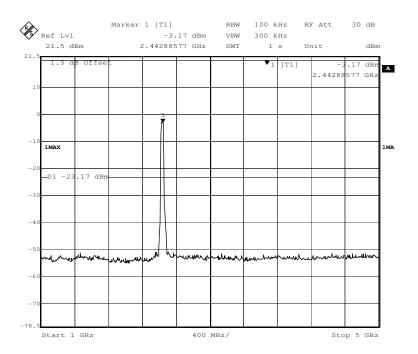
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### Channel 7: 2.442GHz:

#### 30 MHz to 1 GHz



### 1 G to 5 GHz

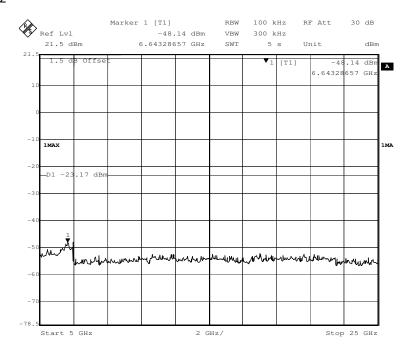




Report No.: GZEM160700448001

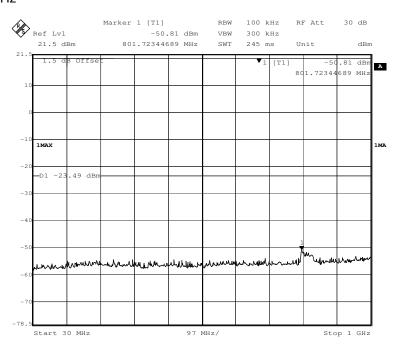
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### 5 G to 25 GHz



## Channel 9:2.452 GHz

## 30 MHz to 1 GHz

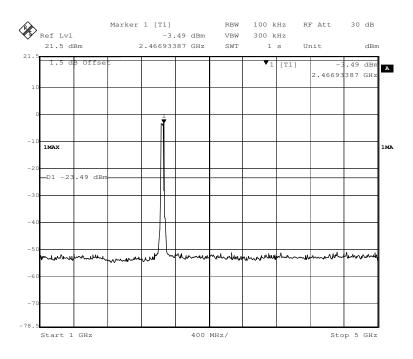




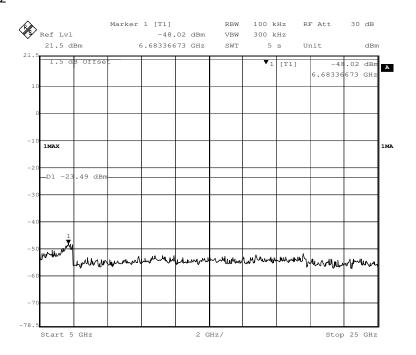
Report No.: GZEM160700448001

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### 1 G to 5 GHz



#### 5 G to 25 GHz





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### 7.6.1 Radiated Emissions which fall in the restricted bands

Test Requirement: FCC Part 15 C section 15.247

(d) 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)).

Test Method: ANSI C63.10: Clause 11.12, 6.3, 6.5 and 6.6

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all

possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

Test site: Measurement Distance: 3m (Semi-Anechoic Chamber)

Limit: 40.0 dBµV/m between 30MHz & 88MHz;

 $43.5 \text{ dB}\mu\text{V/m}$  between 88MHz & 216MHz;

46.0 dBµV/m between 216MHz & 960MHz;

 $54.0 \text{ dB}\mu\text{V/m}$  above 960MHz.

Detector: For PK value:

RBW = 1 MHz for  $f \ge 1$  GHz, 100 kHz for f < 1 GHz

VBW ≥ RBW Sweep = auto

Detector function = peak

Trace = max hold For AV value:

RBW = 1 MHz for  $f \ge 1$  GHz, 100 kHz for f < 1 GHz

VBW =10Hz Sweep = auto

Detector function = peak

Trace = max hold

Test Frequency Range: 30M-26.5GHz



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Section 15.205 Restricted bands of operation.

(a) Except as shown in paragraph (d) of this section. only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
<sup>1</sup> 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 -	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.52525	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	156.7 - 156.9	3260 - 3267	23.6 - 24.0
12.29 - 12.293	162.0125 - 167.17	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	167.72 - 173.2	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	240 - 285	3600 - 4400	
13.36 - 13.41	322 - 335.4		



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#### Test Result:

30MHz~1000 MHz Field Strength of Unwanted Emissions. Quasi-Peak Measurement

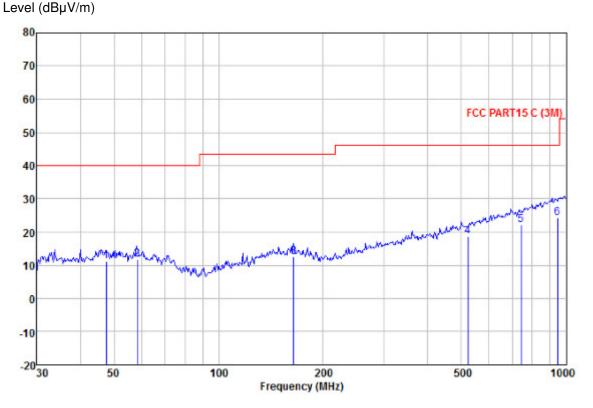
## 7.6.1.1 802.11b mode with 11Mbps data rate

Test at Channel 1 (2.412 GHz) in transmitting status

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

### Vertical:

Peak scan



	ReadAntenna		ReadAntenna				Limit	0ver	
Freq	Level	Factor	Loss	Level	Line	Limit	Remark		
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB			
47.492	22.46	14.38	1.25	11.09	40.00	-28.91	QP		
58.407	23.30	14.14	1.38	11.82	40.00	-28.18	QP		
164.330	23.31	13.52	2.41	12.48	43.50	-31.02	QP		
522.718	23.52	18.48	4.52	18.59	46.00	-27.41	QP		
742.259	23.12	21.76	5.35	22.23	46.00	-23.77	QP		
945.440	21.99	23.94	6.05	24.33	46.00	-21.67	QP		

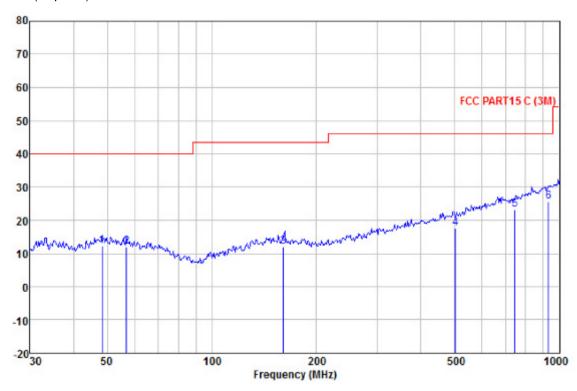


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### Horizontal:

Peak scan Level (dBµV/m)



Freq		Antenna Factor					Remark
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
48.332	23.70	14.42	1.26	12.38	40.00	-27.62	QP
56.792	23.37	14.19	1.34	11.90	40.00	-28.10	QP
160.909	22.61	13.66	2.38	11.88	43.50	-31.62	QP
502.940	22.96	18.15	4.45	17.73	46.00	-28.27	QP
744.866	24.14	21.80	5.39	23.33	46.00	-22.67	QP
932.272	23.43	23.73	6.00	25.47	46.00	-20.53	OP



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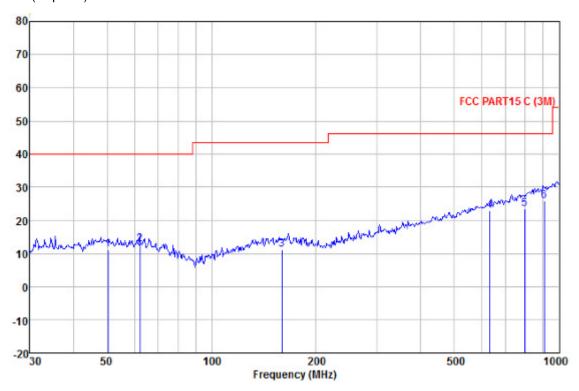
Test at Channel 7 (2.442 GHz) in transmitting status

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

### Vertical:

Peak scan

Level (dBµV/m)



		Antenna					
Freq	Level	Factor	Loss	Level	Line	Limit	Remark
	40.47	-dp/		dp.v//m	dp.v//m	dB	
MHz	dBuV	dB/m	аь	dBuV/m	abuv/m	uв	
50.409	22.33	14.49	1.30	11.12	40.00	-28.88	OP
62.213	24.50			12.81			_
159.225	21.97	13.69	2.37	11.25	43.50	-32.25	QP
631.688	25.50	20.57	4.90	22.87	46.00	-23.13	QP
796.183	23.40	22.38	5.57	23.44	46.00	-22.56	QP
906.482	24.09	23.45	5.93	25.77	46.00	-20.23	QP

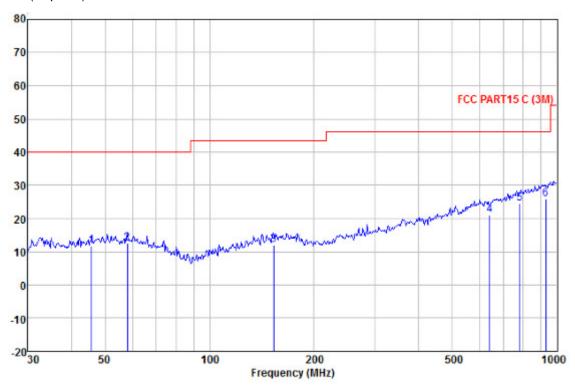


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### Horizontal:

Peak scan Level (dBµV/m)



Freq		Antenna Factor					Remark	
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB		
45.695	23.40	14.23	1.21	11.84	40.00	-28.16	QP	
57.999	23.91	14.15	1.36	12.42	40.00	-27.58	QP	
152.664	22.88	13.50	2.31	11.90	43.50	-31.60	QP	
638.369	23.62	20.66	4.92	21.11	46.00	-24.89	QP	
779.607	24.62	22.26	5.53	24.45	46.00	-21.55	QP	
929.008	23.84	23.69	6.00	25.83	46.00	-20.17	OP	



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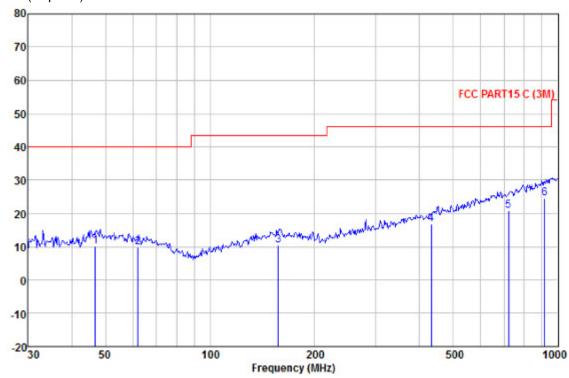
Test at Channel 11 (2.462 GHz) in transmitting status

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

### Vertical:

Peak scan

Level (dBµV/m)



	Freq		Intenna Factor					Remark	
-	MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB		
	46.830	21.58	14.33	1.24	10.15	40.00	-29.85	QP	
	61.995	21.41	13.90	1.44	9.75	40.00	-30.25	QP	
	157.007	21.12	13.64	2.35	10.33	43.50	-33.17	QP	
	432.546	23.21	16.79	4.07	16.69	46.00	-29.31	QP	
	721.726	22.15	21.49	5.25	20.89	46.00	-25.11	QP	
	916.069	22.63	23.55	5.93	24.41	46.00	-21.59	OP	

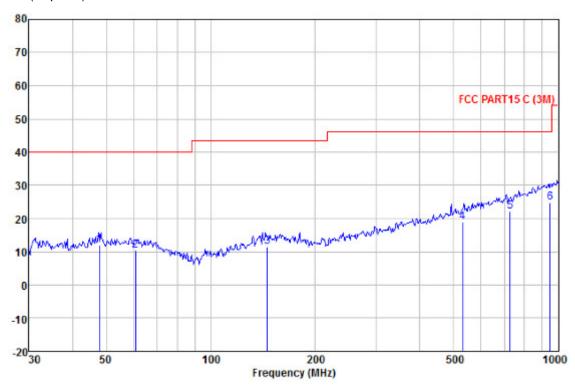


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### Horizontal:

Peak scan Level (dBµV/m)



_	ReadAntenna				Limit	0ver	
Freq	Level	Factor	Loss	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
	abar	GD/	40	azav,	abav,		
47.826	23.22	14.40	1.25	11.87	40.00	-28.13	QP
60.704	21.87	14.04	1.41	10.32	40.00	-29.68	QP
145.351	22.80	13.16	2.27	11.42	43.50	-32.08	QP
531.964	23.63	18.70	4.55	18.92	46.00	-27.08	QP
726.805	23.27	21.55	5.30	22.12	46.00	-23.88	QP
948.761	22.48	24.00	6.05	24.89	46.00	-21.11	QP



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## 7.6.1.2 802.11g mode with 54Mbps data rate

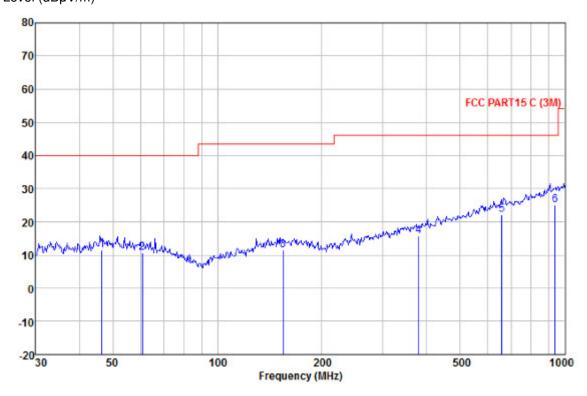
Test at Channel 1 (2.412 GHz) in transmitting status

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

#### Vertical:

Peak scan

Level (dBµV/m)



Freq	ReadAntenna Level Factor			Limit Level Line			Remark
MHz	dBuV				dBuV/m		
46.503	23.06	14.31	1.23	11.60	40.00	-28.40	QP
60.704	22.32	14.04	1.41	10.77	40.00	-29.23	QP
154.821	22.32	13.58	2.32	11.43	43.50	-32.07	QP
378.584	22.79	16.02	3.79	15.61	46.00	-30.39	QP
658.836	24.16	20.97	5.00	22.09	46.00	-23.91	QP
935.546	22.95	23.78	6.00	25.05	46.00	-20.95	QP

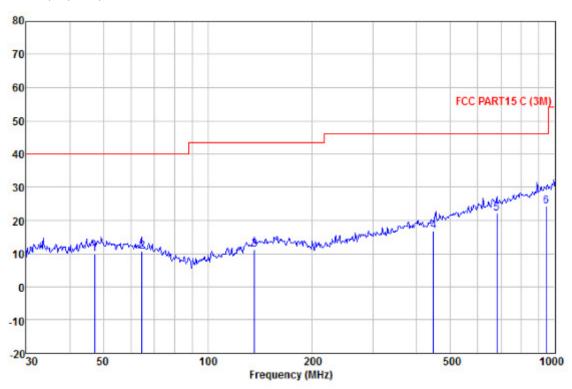


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#### Horizontal:

Peak scan Level (dBµV/m)



			Cable	Limit		0ver	
Freq	Level	Factor	Loss	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
47.160	21.38	14.36	1.24	9.98	40.00	-30.02	QP
64.659	22.76	13.46	1.48	10.70	40.00	-29.30	QP
136.460	22.93	12.79	2.21	11.09	43.50	-32.41	QP
446.414	23.06	17.20	4.15	16.90	46.00	-29.10	QP
679.960	23.80	21.18	5.10	22.08	46.00	-23.92	QP
945.440	22.04	23.94	6.05	24.38	46.00	-21.62	QP



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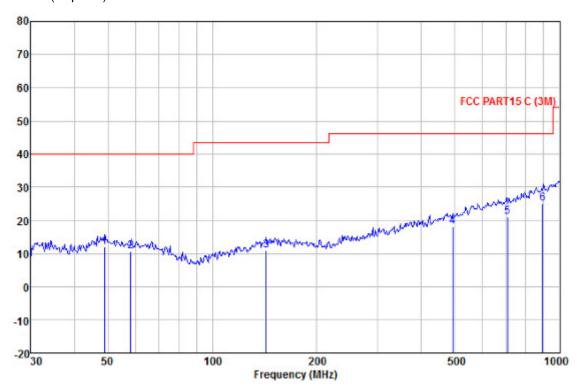
Test at Channel 7 (2.442 GHz) in transmitting status

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

#### Vertical:

Peak scan

Level (dBµV/m)



			Cable	Limit		0ver	
Freq	Level	Factor	Loss	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
48.843	23.17	14.45	1.28	11.90	40.00	-28.10	QP
58.203	22.10	14.14	1.36	10.60	40.00	-29.40	QP
142.824	22.41	13.08	2.25	10.93	43.50	-32.57	QP
492.469	23.39	18.04	4.38	18.04	46.00	-27.96	QP
709.182	22.41	21.38	5.20	20.99	46.00	-25.01	QP
893.857	23.62	23.36	5.90	25.15	46.00	-20.85	QP

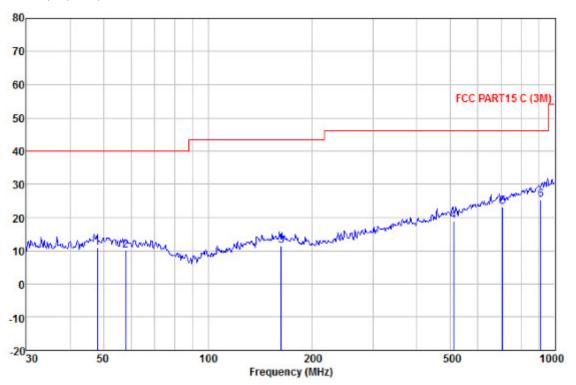


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#### Horizontal:

Peak scan Level (dBµV/m)



	ReadAntenna		Cable	Limit		0ver	
Freq	Level	Factor	Loss	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
47.994	22.18	14.41	1.26	10.85	40.00	-29.15	QP
57.999	21.64	14.15	1.36	10.15	40.00	-29.85	QP
162.611	22.31	13.60	2.40	11.55	43.50	-31.95	QP
510.044	24.15	18.26	4.50	19.01	46.00	-26.99	QP
706.700	24.66	21.36	5.20	23.22	46.00	-22.78	QP
909.667	23.61	23.48	5.93	25.32	46.00	-20.68	QP



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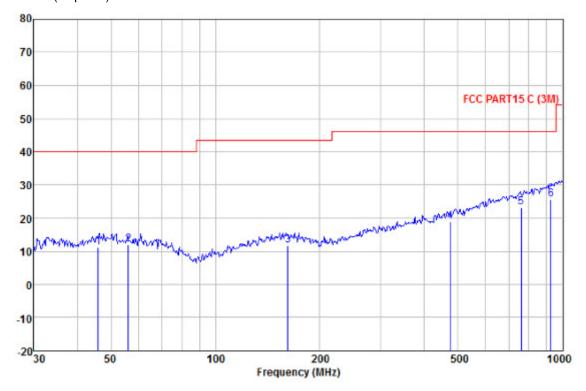
Test at Channel 11 (2.462 GHz) in transmitting status

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

#### Vertical:

Peak scan

Level (dBµV/m)



Freq	ReadAntenna Level Factor			ble L oss Level			Remark
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
46.016	22.84	14.26	1.22	11.32	40.00	-28.68	QP
56.197	23.38	14.22	1.32	11.92	40.00	-28.08	QP
161.474	22.40	13.64	2.38	11.65	43.50	-31.85	QP
475.499	24.39	17.85	4.30	18.86	46.00	-27.14	QP
760.704	23.64	22.06	5.43	23.13	46.00	-22.87	QP
925.756	23.60	23.65	5.97	25.52	46.00	-20.48	OP

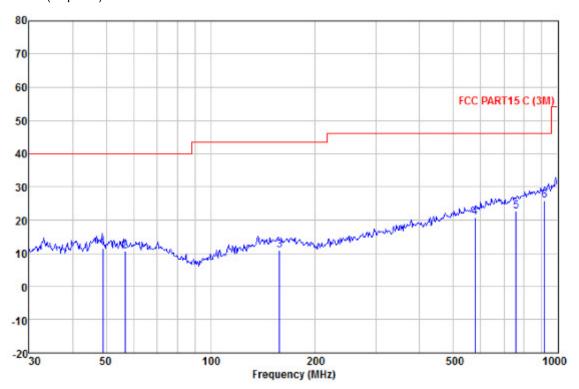


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#### Horizontal:

Peak scan Level (dBµV/m)



			Cable	Limit		0ver	
Freq	Level	Factor	Loss	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
48.843	22.85	14.45	1.28	11.58	40.00	-28.42	QP
56.593	22.07	14.20	1.34	10.61	40.00	-29.39	QP
158.112	21.74	13.66	2.35	10.97	43.50	-32.53	QP
576.644	24.02	19.99	4.73	20.74	46.00	-25.26	QP
758.041	23.32	22.02	5.43	22.77	46.00	-23.23	QP
916.069	23.99	23.55	5.93	25.77	46.00	-20.23	QP



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## 7.6.1.3 802.11n(HT20) mode with 72.2Mbps data rate

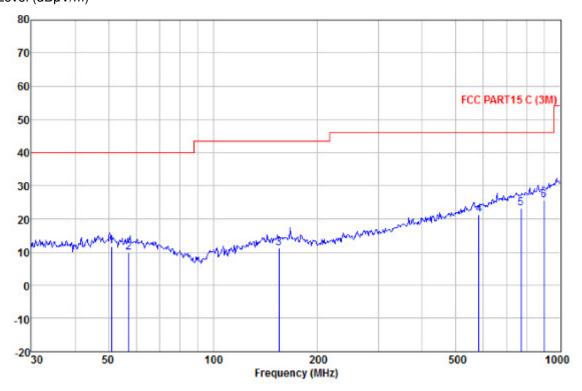
Test at Channel 1 (2.412 GHz) in transmitting status

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

#### Vertical:

Peak scan

Level (dBµV/m)



			Cable	Limit		0ver	
Freq	Level	Factor	Loss	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
50.942	22.83	14.48	1.30	11.61	40.00	-28.39	QP
57.191	21.31	14.18	1.35	9.84	40.00	-30.16	QP
154.821	22.20	13.58	2.32	11.31	43.50	-32.19	QP
582.743	24.54	20.08	4.75	21.37	46.00	-24.63	QP
768.748	23.53	22.15	5.47	23.15	46.00	-22.85	QP
896.997	24.03	23.38	5.90	25.59	46.00	-20.41	QP

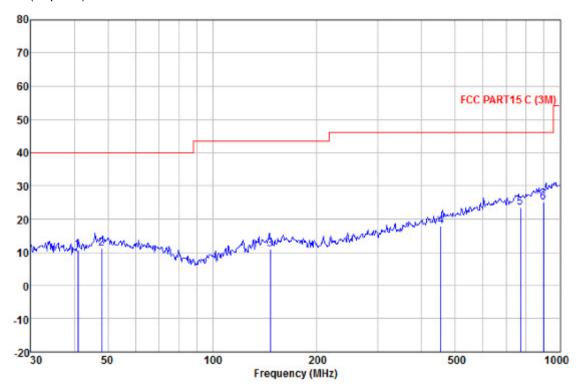


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#### Horizontal:

Peak scan Level (dBµV/m)



Freq					Limit Line		Remark
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
40.988	22.86	13.75	1.12	10.73	40.00	-29.27	QP
47.994	22.60	14.41	1.26	11.27	40.00	-28.73	QP
146.888	22.13	13.22	2.28	10.82	43.50	-32.68	QP
454.310	23.78	17.45	4.18	17.84	46.00	-28.16	QP
768.748	23.91	22.15	5.47	23.53	46.00	-22.47	QP
896.997	23.42	23.38	5.90	24.98	46.00	-21.02	OP



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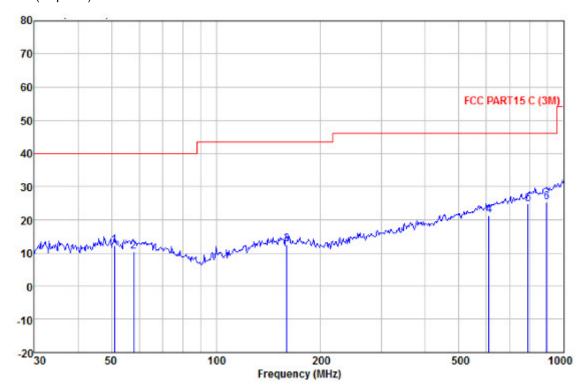
Test at Channel 7 (2.442 GHz) in transmitting status

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

#### Vertical:

Peak scan

Level (dBµV/m)



			Cable	Limit		0ver	
Freq	Level	Factor	Loss	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
50.942	23.49	14.48	1.30	12.27	40.00	-27.73	QP
57.999	21.87	14.15	1.36	10.38	40.00	-29.62	QP
159.784	23.21	13.70	2.37	12.51	43.50	-30.99	QP
609.922	24.12	20.37	4.82	21.28	46.00	-24.72	QP
790.619	24.81	22.34	5.57	24.80	46.00	-21.20	QP
893.857	23.77	23.36	5.90	25.30	46.00	-20.70	QP

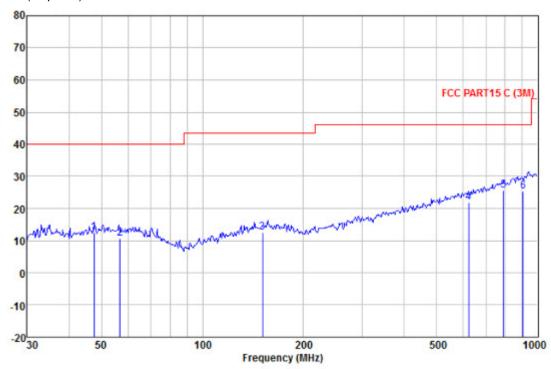


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#### Horizontal:

Peak scan Level (dBµV/m)



Enca	ReadAntenna Level Factor			Limit			Domank
rreq	revei	ractor	LOSS	rever	Line	Limit	Kemark
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
47.492	23.85	14.38	1.25	12.48	40.00	-27.52	QP
56.792	22.12	14.19	1.34	10.65	40.00	-29.35	QP
151.067	23.64	13.44	2.30	12.58	43.50	-30.92	QP
622.890	24.55	20.48	4.88	21.83	46.00	-24.17	QP
790.619	25.53	22.34	5.57	25.52	46.00	-20.48	QP
903.309	23.73	23.43	5.90	25.36	46.00	-20.64	OP



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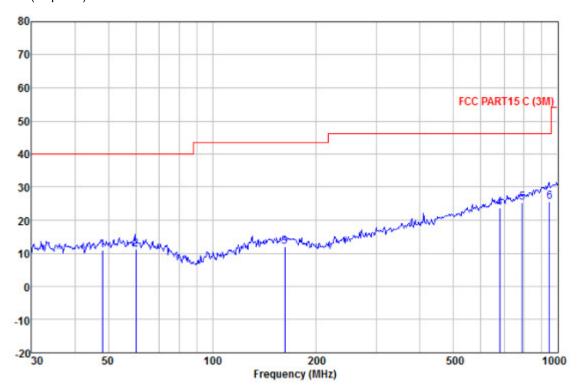
Test at Channel 11 (2.462 GHz) in transmitting status

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

#### Vertical:

Peak scan

Level (dBµV/m)



Freq		Antenna Factor					Remark	
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB		
47.994	22.15	14.41	1.26	10.82	40.00	-29.18	QP	
60.069	22.71	14.10	1.40	11.21	40.00	-28.79	QP	
162.041	22.86	13.62	2.38	12.09	43.50	-31.41	QP	
679.960	25.58	21.18	5.10	23.86	46.00	-22.14	QP	
790.619	25.37	22.34	5.57	25.36	46.00	-20.64	QP	
948.761	23.32	24.00	6.05	25.73	46.00	-20.27	OP	

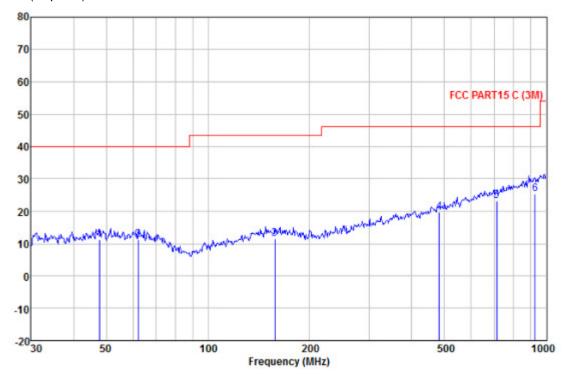


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#### Horizontal:

Peak scan Level (dBµV/m)



	ReadA			Limit		Over	
Freq	Level	Factor	Loss	Level	Line	Limit	Remark
	dp.ar	dp /		dp. at /	dp. at /		
MHz	abuv	dB/m	ав	aBuv/m	aBuv/m	dB	
47.826	22.42	14.40	1.25	11.07	40.00	-28.93	QP
62.213	22.98	13.87	1.44	11.29	40.00	-28.71	QP
157.559	22.29	13.65	2.35	11.51	43.50	-31.99	QP
482.216	25.08	17.93	4.33	19.62	46.00	-26.38	QP
711.674	24.61	21.40	5.20	23.21	46.00	-22.79	QP
925.756	23.47	23.65	5.97	25.39	46.00	-20.61	OP



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## 7.6.1.4 802.11n(HT40) mode with 150Mbps data rate

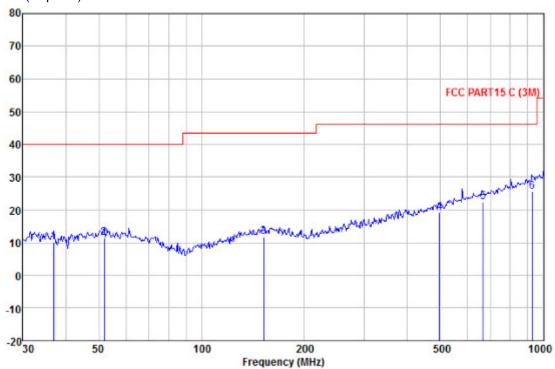
Test at Channel 3 (2.422 GHz) in transmitting status

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

#### Vertical:

Peak scan

Level (dBµV/m)



Freq		ntenna Factor					Remark
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
36.895 51.843					40.00 40.00		_
152.130					43.50		-
495.934	24.56	18.07	4.40	19.24	46.00	-26.76	QP
665.804	24.34	21.05	5.04	22.41	46.00	-23.59	QP
929.008	23.52	23.69	6.00	25.51	46.00	-20.49	OP

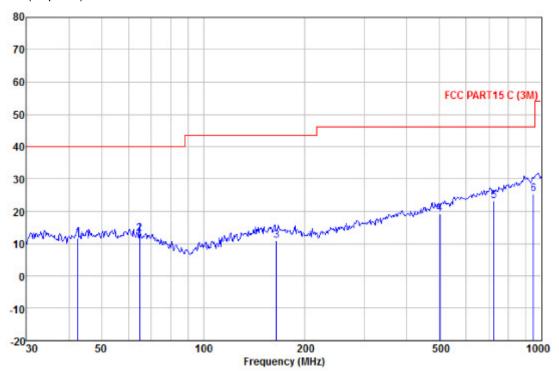


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#### Horizontal:

Peak scan Level (dBµV/m)



Freq		Antenna Factor			Limit Line		Remark	
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB		
42.600	23.83	13.86	1.15	11.84	40.00	-28.16	QP	
64.887	25.08	13.40	1.50	12.98	40.00	-27.02	QP	
164.330	21.68	13.52	2.41	10.85	43.50	-32.65	QP	
501.179	24.49	18.12	4.45	19.24	46.00	-26.76	QP	
724.261	24.35	21.52	5.25	23.12	46.00	-22.88	QP	
948.761	22.88	24.00	6.05	25.29	46.00	-20.71	OP	



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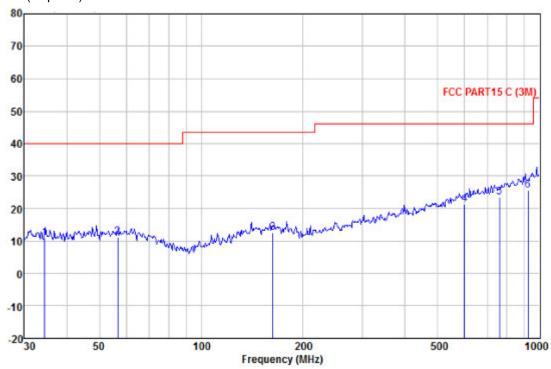
Test at Channel 7 (2.442 GHz) in transmitting status

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

#### Vertical:

Peak scan

Level (dBµV/m)



Freq		Antenna Factor			Limit Line		Remark
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
34.517	23.05	13.91	1.05	10.96	40.00	-29.04	QP
56.593	22.62	14.20	1.34	11.16	40.00	-28.84	QP
162.611	23.22	13.60	2.40	12.46	43.50	-31.04	QP
599.321	24.24	20.30	4.80	21.34	46.00	-24.66	QP
760.704	24.00	22.06	5.43	23.49	46.00	-22.51	QP
922.516	23.81	23.62	5.97	25.70	46.00	-20.30	QP



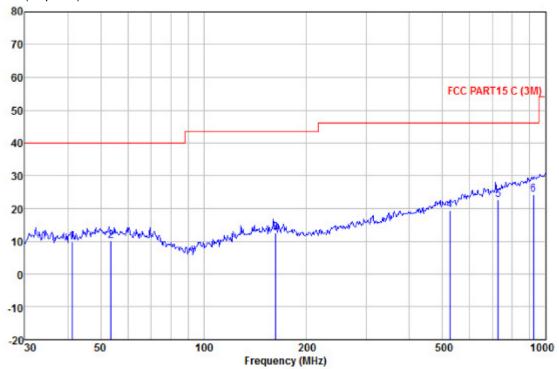
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#### Horizontal:

Peak scan

Level (dBµV/m)



	ReadA	ntenna	Cable		Limit	0ver	
Freq	Level	Factor	Loss	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB	
41.277	21.96	13.77	1.13	9.86	40.00	-30.14	QP
53.505	21.55	14.38	1.30	10.23	40.00	-29.77	QP
162.611	23.40	13.60	2.40	12.64	43.50	-30.86	QP
524.554	24.42	18.52	4.52	19.53	46.00	-26.47	QP
726.805	23.82	21.55	5.30	22.67	46.00	-23.33	QP
922.516	22.30	23.62	5.97	24.19	46.00	-21.81	OP



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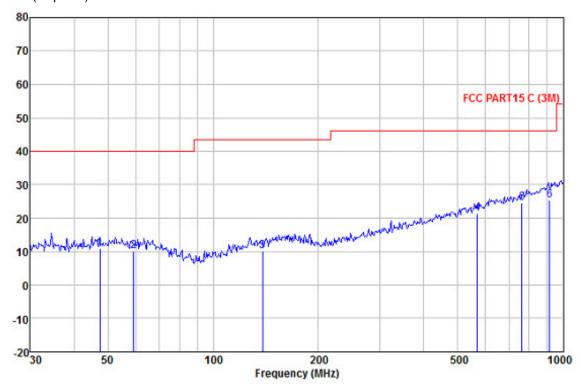
Test at Channel 9 (2.452 GHz) in transmitting status

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

#### Vertical:

Peak scan

Level (dBµV/m)



Freq		Antenna Factor					Remark	
MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB		-
47.492	22.37	14.38	1.25	11.00	40.00	-29.00	QP	
59.232	21.50	14.12	1.39	10.01	40.00	-29.99	QP	
138.387	21.70	12.92	2.23	10.02	43.50	-33.48	QP	
568.613	24.77	19.84	4.66	21.27	46.00	-24.73	QP	
763.376	25.04	22.09	5.47	24.60	46.00	-21.40	QP	
916.069	23.50	23.55	5.93	25.28	46.00	-20.72	OP	

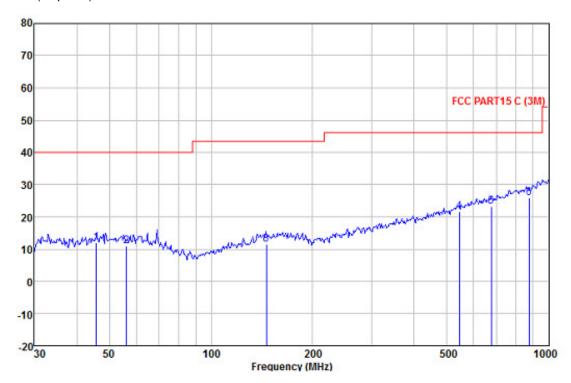


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#### Horizontal:

Peak scan Level (dBµV/m)



		ReadA	ntenna	Cable		Limit	0ver		
F	req	Level	Factor	Loss	Level	Line	Limit	Remark	
	MHz	dBuV	dB/m	dB	dBuV/m	dBuV/m	dB		
45.	695	23.61	14.23	1.21	12.05	40.00	-27.95	QP	
56.	197	22.33	14.22	1.32	10.87	40.00	-29.13	QP	
145	861	22.95	13.18	2.27	11.59	43.50	-31.91	QP	
543.	274	25.95	19.04	4.57	21.57	46.00	-24.43	QP	
675	208	25.09	21.14	5.07	23.29	46.00	-22.71	QP	
875	247	24.61	23.22	5.90	25.92	46.00	-20.08	QP	



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### Above 1GHz Field Strength of Unwanted Emissions. Peak and Average Measurement

## 7.6.1.5 802.11b mode with 11Mbps data rate

Test at Channel 1 (2.412 GHz) in transmitting status

#### **Peak Measurement:**

Frequency (MHz)	Reading Level (dB <sub>µ</sub> V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	39.83	27.93	6.80	35.20	39.36	74.00	Vertical
2390.00	40.33	27.61	6.87	35.20	39.61	74.00	V
2483.50	41.16	27.55	7.07	35.27	40.51	74.00	V
2500.00	40.97	27.55	7.10	35.30	40.32	74.00	V
2310.00	41.77	27.93	6.80	35.20	41.30	74.00	Horizontal
2390.00	43.72	27.61	6.87	35.20	43.00	74.00	Н
2483.50	40.56	27.55	7.07	35.27	39.91	74.00	Н
2500.00	41.14	27.55	7.10	35.30	40.49	74.00	Н

Frequency (MHz)	Reading Level (dBµV)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	28.40	27.93	6.80	35.20	27.93	54.00	Vertical
2390.00	27.32	27.61	6.87	35.20	26.60	54.00	V
2483.50	27.42	27.55	7.07	35.27	26.77	54.00	V
2500.00	27.99	27.55	7.10	35.30	27.34	54.00	V
2310.00	26.57	27.93	6.80	35.20	26.10	54.00	Horizontal
2390.00	27.74	27.61	6.87	35.20	27.02	54.00	Н
2483.50	28.21	27.55	7.07	35.27	27.56	54.00	Н
2500.00	28.00	27.55	7.10	35.30	27.35	54.00	Н



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Test at Channel 7 (2.442 GHz) in transmitting status

### **Peak Measurement:**

Frequency (MHz)	Reading Level (dB <sub>µ</sub> V)	Antenna actors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	40.60	27.93	6.80	35.20	40.13	74.00	Vertical
2390.00	41.24	27.61	6.87	35.20	40.52	74.00	V
2483.50	40.91	27.55	7.07	35.27	40.26	74.00	V
2500.00	41.26	27.55	7.10	35.30	40.61	74.00	V
2310.00	41.41	27.93	6.80	35.20	40.94	74.00	Horizontal
2390.00	43.28	27.61	6.87	35.20	42.56	74.00	Н
2483.50	40.64	27.55	7.07	35.27	39.99	74.00	Н
2500.00	41.72	27.55	7.10	35.30	41.07	74.00	Н

Frequency (MHz)	Reading Level	Antenna factors	Cable loss	Preamp factor	Emission Level	Limit (dBμV/m)	Antenna polarization
(	(dBμV)	(dB/m)	(dB)	(dB)	(dBµV/m)	(αΣμν/ιιι)	polarization
2310.00	27.84	27.93	6.80	35.20	27.37	54.00	Vertical
2390.00	27.15	27.61	6.87	35.20	26.43	54.00	V
2483.50	28.42	27.55	7.07	35.27	27.77	54.00	V
2500.00	26.52	27.55	7.10	35.30	25.87	54.00	V
2310.00	27.12	27.93	6.80	35.20	26.65	54.00	Horizontal
2390.00	28.55	27.61	6.87	35.20	27.83	54.00	Н
2483.50	27.72	27.55	7.07	35.27	27.07	54.00	Н
2500.00	29.61	27.55	7.10	35.30	28.96	54.00	Н



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Test at Channel 11 (2.462 GHz) in transmitting status

#### **Peak Measurement:**

Frequency (MHz)	Reading Level (dB <sub>µ</sub> V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	40.51	27.93	6.80	35.20	40.04	74.00	Vertical
2390.00	40.92	27.61	6.87	35.20	40.20	74.00	V
2483.50	40.40	27.55	7.07	35.27	39.75	74.00	V
2500.00	41.46	27.55	7.10	35.30	40.81	74.00	V
2310.00	43.50	27.93	6.80	35.20	43.03	74.00	Horizontal
2390.00	44.36	27.61	6.87	35.20	43.64	74.00	Н
2483.50	41.73	27.55	7.07	35.27	41.08	74.00	Н
2500.00	42.37	27.55	7.10	35.30	41.72	74.00	Н

Frequency (MHz)	Reading Level (dBµV)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	27.01	27.93	6.80	35.20	26.54	54.00	Vertical
2390.00	27.54	27.61	6.87	35.20	26.82	54.00	V
2483.50	28.30	27.55	7.07	35.27	27.65	54.00	V
2500.00	28.08	27.55	7.10	35.30	27.43	54.00	V
2310.00	27.31	27.93	6.80	35.20	26.84	54.00	Horizontal
2390.00	28.13	27.61	6.87	35.20	27.41	54.00	Н
2483.50	27.48	27.55	7.07	35.27	26.83	54.00	Н
2500.00	30.47	27.55	7.10	35.30	29.82	54.00	Н



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## 7.6.1.6 802.11g mode with 54Mbps data rate

Test at Channel 1 (2.412 GHz) in transmitting status

#### **Peak Measurement:**

Frequency (MHz)	Reading Level (dB <sub>µ</sub> V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	40.40	27.93	6.80	35.20	39.93	74.00	Vertical
2390.00	41.02	27.61	6.87	35.20	40.30	74.00	V
2483.50	41.30	27.55	7.07	35.27	40.65	74.00	V
2500.00	41.26	27.55	7.10	35.30	40.61	74.00	V
2310.00	41.13	27.93	6.80	35.20	40.66	74.00	Horizontal
2390.00	42.68	27.61	6.87	35.20	41.96	74.00	Н
2483.50	41.00	27.55	7.07	35.27	40.35	74.00	Н
2500.00	40.95	27.55	7.10	35.30	40.30	74.00	Н

Frequency (MHz)	Reading Level (dBμV)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	29.21	27.93	6.80	35.20	28.74	54.00	Vertical
2390.00	29.02	27.61	6.87	35.20	28.30	54.00	V
2483.50	28.47	27.55	7.07	35.27	27.82	54.00	V
2500.00	27.72	27.55	7.10	35.30	27.07	54.00	V
2310.00	27.92	27.93	6.80	35.20	27.45	54.00	Horizontal
2390.00	27.29	27.61	6.87	35.20	26.57	54.00	Н
2483.50	26.99	27.55	7.07	35.27	26.34	54.00	Н
2500.00	27.59	27.55	7.10	35.30	26.94	54.00	Н



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Test at Channel 7 (2.442 GHz) in transmitting status

#### **Peak Measurement:**

Frequency (MHz)	Reading Level (dBμV)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	40.58	27.93	6.80	35.20	40.11	74.00	Vertical
2390.00	41.26	27.61	6.87	35.20	40.54	74.00	V
2483.50	40.65	27.55	7.07	35.27	40.00	74.00	V
2500.00	41.58	27.55	7.10	35.30	40.93	74.00	V
2310.00	41.88	27.93	6.80	35.20	41.41	74.00	Horizontal
2390.00	43.68	27.61	6.87	35.20	42.96	74.00	Н
2483.50	42.20	27.55	7.07	35.27	41.55	74.00	Н
2500.00	42.07	27.55	7.10	35.30	41.42	74.00	Н

Frequency (MHz)	Reading Level (dBµV)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	29.12	27.93	6.80	35.20	28.65	54.00	Vertical
2390.00	29.51	27.61	6.87	35.20	28.79	54.00	V
2483.50	26.22	27.55	7.07	35.27	25.57	54.00	V
2500.00	28.88	27.55	7.10	35.30	28.23	54.00	V
2310.00	27.64	27.93	6.80	35.20	27.17	54.00	Horizontal
2390.00	28.67	27.61	6.87	35.20	27.95	54.00	Н
2483.50	27.61	27.55	7.07	35.27	26.96	54.00	Н
2500.00	27.08	27.55	7.10	35.30	26.43	54.00	Н



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Test at Channel 11 (2.462 GHz) in transmitting status

#### **Peak Measurement:**

Frequency (MHz)	Reading Level (dB <sub>µ</sub> V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	40.37	27.93	6.80	35.20	39.90	74.00	Vertical
2390.00	41.05	27.61	6.87	35.20	40.33	74.00	V
2483.50	41.46	27.55	7.07	35.27	40.81	74.00	V
2500.00	40.61	27.55	7.10	35.30	39.96	74.00	V
2310.00	42.42	27.93	6.80	35.20	41.95	74.00	Horizontal
2390.00	45.32	27.61	6.87	35.20	44.60	74.00	Н
2483.50	41.29	27.55	7.07	35.27	40.64	74.00	Н
2500.00	42.43	27.55	7.10	35.30	41.78	74.00	Н

Frequency (MHz)	Reading Level (dBµV)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	28.05	27.93	6.80	35.20	27.58	54.00	Vertical
2390.00	28.05	27.61	6.87	35.20	27.33	54.00	V
2483.50	26.93	27.55	7.07	35.27	26.28	54.00	V
2500.00	26.68	27.55	7.10	35.30	26.03	54.00	V
2310.00	26.86	27.93	6.80	35.20	26.39	54.00	Horizontal
2390.00	28.05	27.61	6.87	35.20	27.33	54.00	Н
2483.50	28.53	27.55	7.07	35.27	27.88	54.00	Н
2500.00	29.26	27.55	7.10	35.30	28.61	54.00	Н



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## 7.6.1.7 802.11n(HT20) mode with 72.2Mbps data rate

Test at Channel 1 (2.412 GHz) in transmitting status

#### **Peak Measurement:**

Frequency (MHz)	Reading Level (dB <sub>µ</sub> V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	40.23	27.93	6.80	35.20	39.76	74.00	Vertical
2390.00	40.71	27.61	6.87	35.20	39.99	74.00	V
2483.50	40.99	27.55	7.07	35.27	40.34	74.00	V
2500.00	41.04	27.55	7.10	35.30	40.39	74.00	V
2310.00	40.91	27.93	6.80	35.20	40.44	74.00	Horizontal
2390.00	42.64	27.61	6.87	35.20	41.92	74.00	Н
2483.50	41.51	27.55	7.07	35.27	40.86	74.00	Н
2500.00	42.48	27.55	7.10	35.30	41.83	74.00	Н

Frequency (MHz)	Reading Level (dBµV)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	29.86	27.93	6.80	35.20	29.39	54.00	Vertical
2390.00	27.99	27.61	6.87	35.20	27.27	54.00	V
2483.50	28.76	27.55	7.07	35.27	28.11	54.00	V
2500.00	26.62	27.55	7.10	35.30	25.97	54.00	V
2310.00	27.72	27.93	6.80	35.20	27.25	54.00	Horizontal
2390.00	29.25	27.61	6.87	35.20	28.53	54.00	Н
2483.50	26.75	27.55	7.07	35.27	26.10	54.00	Н
2500.00	28.03	27.55	7.10	35.30	27.38	54.00	Н



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Test at Channel 7 (2.442 GHz) in transmitting status

### **Peak Measurement:**

Frequency (MHz)	Reading Level (dB <sub>µ</sub> V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	40.10	27.93	6.80	35.20	39.63	74.00	Vertical
2390.00	41.04	27.61	6.87	35.20	40.32	74.00	V
2483.50	41.35	27.55	7.07	35.27	40.70	74.00	V
2500.00	41.52	27.55	7.10	35.30	40.87	74.00	V
2310.00	42.32	27.93	6.80	35.20	41.85	74.00	Horizontal
2390.00	43.16	27.61	6.87	35.20	42.44	74.00	Н
2483.50	41.18	27.55	7.07	35.27	40.53	74.00	Н
2500.00	42.70	27.55	7.10	35.30	42.05	74.00	Н

Frequency (MHz)	Reading Level (dBµV)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	28.04	27.93	6.80	35.20	27.57	54.00	Vertical
2390.00	28.27	27.61	6.87	35.20	27.55	54.00	V
2483.50	27.83	27.55	7.07	35.27	27.18	54.00	V
2500.00	26.52	27.55	7.10	35.30	25.87	54.00	V
2310.00	27.56	27.93	6.80	35.20	27.09	54.00	Horizontal
2390.00	28.04	27.61	6.87	35.20	27.32	54.00	Н
2483.50	28.61	27.55	7.07	35.27	27.96	54.00	Н
2500.00	26.01	27.55	7.10	35.30	25.36	54.00	Н



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Test at Channel 11 (2.462 GHz) in transmitting status

#### **Peak Measurement:**

			1		I	I	
Frequency (MHz)	Reading Level (dB <sub>µ</sub> V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	40.33	27.93	6.80	35.20	39.86	74.00	Vertical
2390.00	40.93	27.61	6.87	35.20	40.21	74.00	V
2483.50	41.54	27.55	7.07	35.27	40.89	74.00	V
2500.00	40.60	27.55	7.10	35.30	39.95	74.00	V
2310.00	42.70	27.93	6.80	35.20	42.23	74.00	Horizontal
2390.00	45.04	27.61	6.87	35.20	44.32	74.00	Н
2483.50	42.30	27.55	7.07	35.27	41.65	74.00	Н
2500.00	42.23	27.55	7.10	35.30	41.58	74.00	Н

3							
Frequency (MHz)	Reading Level (dBμV)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBµV/m)	Antenna polarization
2310.00	27.46	27.93	6.80	35.20	26.99	54.00	Vertical
2390.00	26.94	27.61	6.87	35.20	26.22	54.00	V
2483.50	29.22	27.55	7.07	35.27	28.57	54.00	V
2500.00	28.24	27.55	7.10	35.30	27.59	54.00	V
2310.00	27.88	27.93	6.80	35.20	27.41	54.00	Horizontal
2390.00	29.84	27.61	6.87	35.20	29.12	54.00	Н
2483.50	26.03	27.55	7.07	35.27	25.38	54.00	Н
2500.00	29.34	27.55	7.10	35.30	28.69	54.00	Н



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## 7.6.1.8 802.11n(HT40) mode with 150Mbps data rate

Test at Channel 3 (2.422 GHz) in transmitting status

#### **Peak Measurement:**

Frequency (MHz)	Reading Level (dB <sub>µ</sub> V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	40.32	27.93	6.80	35.20	39.85	74.00	Vertical
2390.00	41.01	27.61	6.87	35.20	40.29	74.00	V
2483.50	40.57	27.55	7.07	35.27	39.92	74.00	V
2500.00	41.01	27.55	7.10	35.30	40.36	74.00	V
2310.00	41.72	27.93	6.80	35.20	41.25	74.00	Horizontal
2390.00	42.74	27.61	6.87	35.20	42.02	74.00	Н
2483.50	40.60	27.55	7.07	35.27	39.95	74.00	Н
2500.00	41.04	27.55	7.10	35.30	40.39	74.00	Н

Frequency (MHz)	Reading Level (dBμV)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	27.45	27.93	6.80	35.20	26.98	54.00	Vertical
2390.00	28.12	27.61	6.87	35.20	27.40	54.00	V
2483.50	28.15	27.55	7.07	35.27	27.50	54.00	V
2500.00	26.86	27.55	7.10	35.30	26.21	54.00	V
2310.00	27.54	27.93	6.80	35.20	27.07	54.00	Horizontal
2390.00	27.11	27.61	6.87	35.20	26.39	54.00	Н
2483.50	27.26	27.55	7.07	35.27	26.61	54.00	Н
2500.00	26.22	27.55	7.10	35.30	25.57	54.00	Н



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Test at Channel 7 (2.442 GHz) in transmitting status

#### **Peak Measurement:**

Frequency (MHz)	Reading Level (dBμV)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBμV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	40.52	27.93	6.80	35.20	40.05	74.00	Vertical
2390.00	41.24	27.61	6.87	35.20	40.52	74.00	V
2483.50	41.52	27.55	7.07	35.27	40.87	74.00	V
2500.00	41.76	27.55	7.10	35.30	41.11	74.00	V
2310.00	40.77	27.93	6.80	35.20	40.30	74.00	Horizontal
2390.00	44.14	27.61	6.87	35.20	43.42	74.00	Н
2483.50	42.47	27.55	7.07	35.27	41.82	74.00	Н
2500.00	42.06	27.55	7.10	35.30	41.41	74.00	Н

Frequency (MHz)	Reading Level (dBµV)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	27.96	27.93	6.80	35.20	27.49	54.00	Vertical
2390.00	27.48	27.61	6.87	35.20	26.76	54.00	V
2483.50	26.88	27.55	7.07	35.27	26.23	54.00	V
2500.00	27.81	27.55	7.10	35.30	27.16	54.00	V
2310.00	26.70	27.93	6.80	35.20	26.23	54.00	Horizontal
2390.00	28.62	27.61	6.87	35.20	27.90	54.00	Н
2483.50	28.40	27.55	7.07	35.27	27.75	54.00	Н
2500.00	28.80	27.55	7.10	35.30	28.15	54.00	Н



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Test at Channel 9 (2.452 GHz) in transmitting status

#### **Peak Measurement:**

Frequency (MHz)	Reading Level (dBμV)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	40.08	27.93	6.80	35.20	39.61	74.00	Vertical
2390.00	40.22	27.61	6.87	35.20	39.50	74.00	V
2483.50	42.06	27.55	7.07	35.27	41.41	74.00	V
2500.00	41.11	27.55	7.10	35.30	40.46	74.00	V
2310.00	42.32	27.93	6.80	35.20	41.85	74.00	Horizontal
2390.00	44.58	27.61	6.87	35.20	43.86	74.00	Н
2483.50	41.49	27.55	7.07	35.27	40.84	74.00	Н
2500.00	42.04	27.55	7.10	35.30	41.39	74.00	Н

Frequency (MHz)	Reading Level (dBµV)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dBµV/m)	Limit (dBμV/m)	Antenna polarization
2310.00	25.97	27.93	6.80	35.20	25.50	54.00	Vertical
2390.00	28.39	27.61	6.87	35.20	27.67	54.00	V
2483.50	28.36	27.55	7.07	35.27	27.71	54.00	V
2500.00	25.02	27.55	7.10	35.30	24.37	54.00	V
2310.00	27.81	27.93	6.80	35.20	27.34	54.00	Horizontal
2390.00	27.54	27.61	6.87	35.20	26.82	54.00	Н
2483.50	26.15	27.55	7.07	35.27	25.50	54.00	Н
2500.00	27.56	27.55	7.10	35.30	26.91	54.00	Н



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## 7.7 Band Edges Requirement

Test Requirement: FCC Part 15 C section 15.247

(d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating. The radio frequency power that is produced by the intentional radiator 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 the transmitter demonstrates compliance with the peak conducted power limits.

Frequency Band: 2400 MHz to 2483.5 MHz

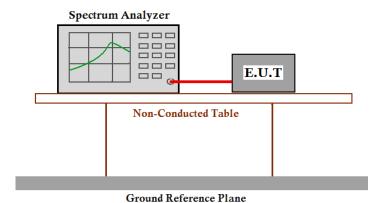
Test Method: ANSI C63.10: Clause 11.13

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all

possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following

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

**Test Configuration:** 





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#### Test Procedure:

- 1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum analyzer or power meter.
- 2. Set instrument center frequency to the frequency of the emission to be measured(must be within 2MHz of the authorized band edge).
- 3. Set span to 2MHz,
- 4. RBW=100kHz,
- 5. VBW≥3×RBW
- 6. Detector=peak
- 7. Sweep time =auto,
- 8. Trace mode=max hold.
- Allow sweep to continue until the trace stabilizes(required measurement time may increase for low duty cycle applications)
- 10. Compute the power by integrating the spectrum over 1MHz using the analyzer's band power measurement function with band limits set equal to the emission frequency( $f_{emission}$ )±0.5MHz.If the instrument does not have a band power function,the sum the amplitude levels(in power units) at 100kHz intervals extending across the 1MHz spectrum defined by femission±0.5MHz.



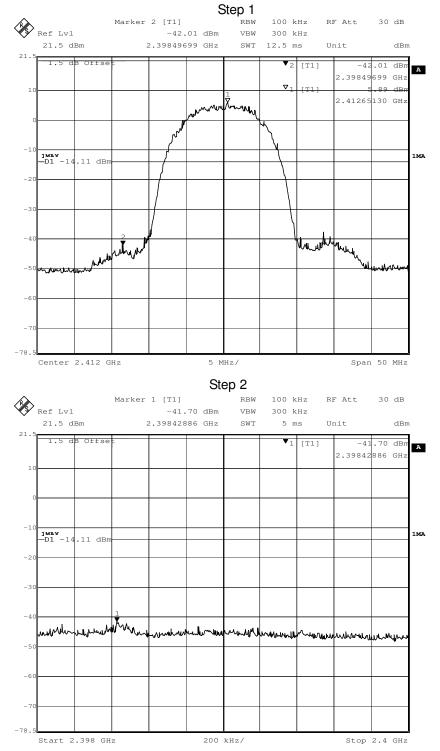
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### Test result with plots as follows:

Compare with the output power of the lowest frequency, the Lower Edges attenuated more than 20dB Compare with the output power of the highest frequency, the Upper Edges attenuated more than 20dB. **802.11b mode with 11 Mbps data rate** 

Channel1: 2.412 GHz





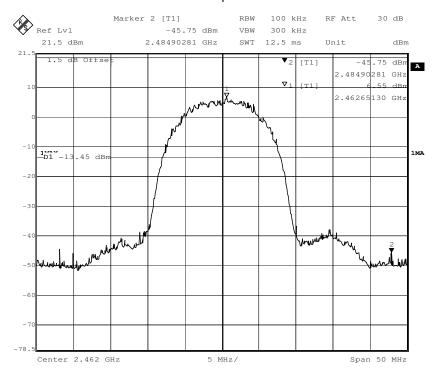
Report No.: GZEM160700448001

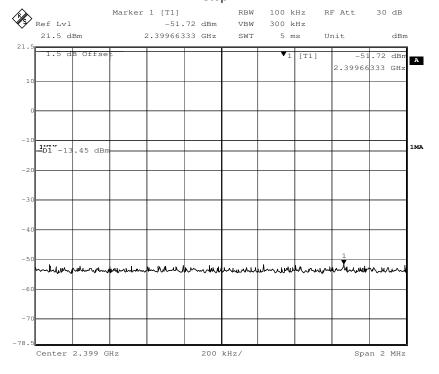
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#### 802.11b mode with 11 Mbps data rate

Channel11: 2.462 GHz

### Step 1







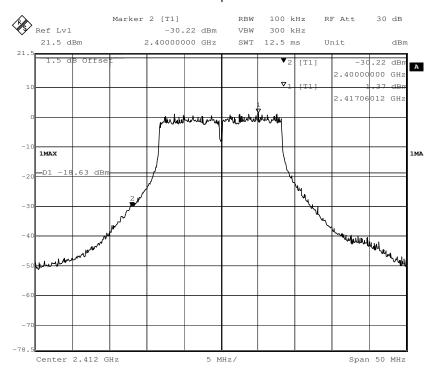
Report No.: GZEM160700448001

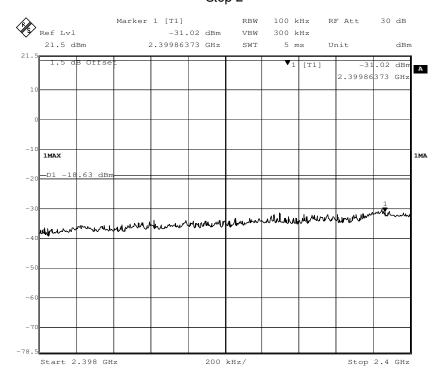
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### 802.11g mode with 54 Mbps data rate

Channel11: 2.412 GHz

Step 1





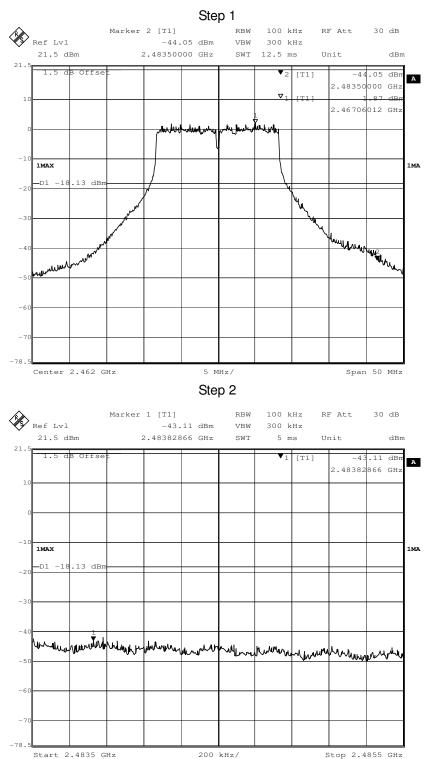


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### 802.11g mode with 54 Mbps data rate

Channel11: 2.462 GHz



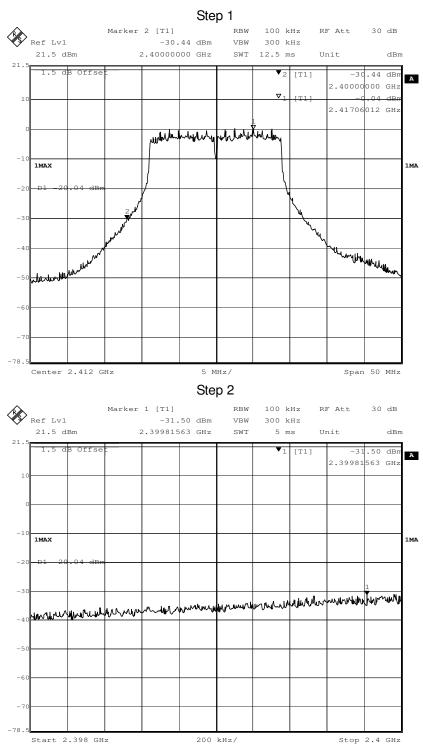


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### 802.11n(HT20) mode with 72.2Mbps data rate

Channel1: 2.412 GHz





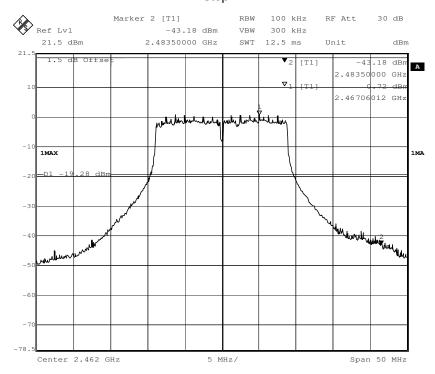
Report No.: GZEM160700448001

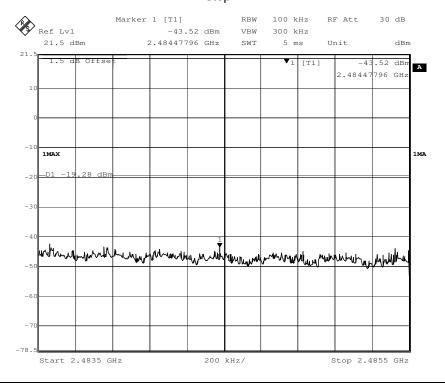
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#### 802.11n(HT20) mode with 72.2Mbps data rate

Channel11: 2.462 GHz

### Step 1







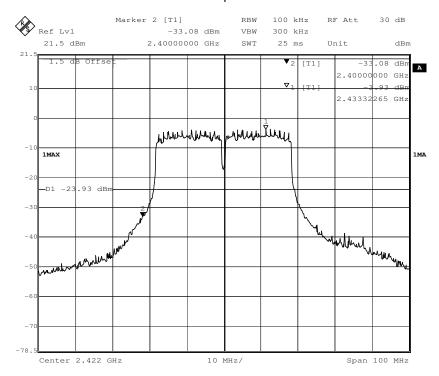
Report No.: GZEM160700448001

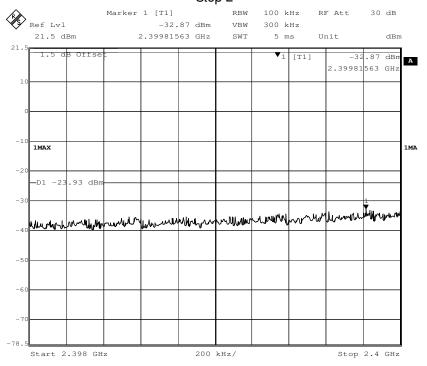
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### 802.11n(HT40) mode with 150Mbps data rate

Channel 3: 2.422 GHz

#### Step 1





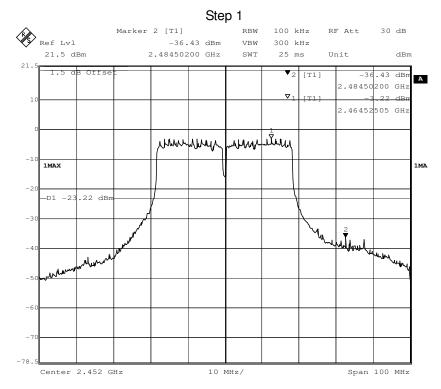


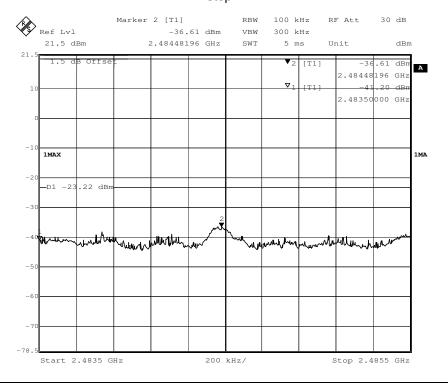
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#### 802.11n(HT40) mode with 150Mbps data rate

Channel 9: 2.452 GHz







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### 7.1 Conducted Emissions at Mains Terminals 150 kHz to 30MHz

Test Requirement: FCC Part 15 C section 15.207

Test Method: ANSI C63.10: Clause 6.2

Frequency Range: 150 kHz to 30 MHz

**Detector:** Peak for pre-scan (9kHz Resolution Bandwidth)

**Test Limit** 

#### Limits for conducted disturbance at the mains ports of class B

Frequency Range	Class B Limit (dBuV)				
(MHz)	Quasi-peak	Average			
0.15 to 0.50	66 to 56	56 to 46			
0.50 to 5	56	46			
5 to 30	60	50			

NOTE 1 The limit decreases linearly with the logarithm of the frequency in the range 0,15 MHz to 0,50 MHz.

#### **EUT Operation:**

Test in normal operating mode. For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage.

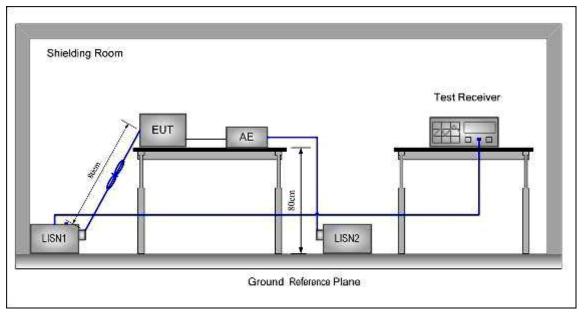
Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).



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### **Test Configuration:**



#### Test procedure:

- 1. The mains terminal disturbance voltage test was conducted in a shielded room.
- 2. The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a  $50\Omega/50\mu H + 5\Omega$  linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.
- 4. The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0,4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0,8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0,8 m from the LISN 2.



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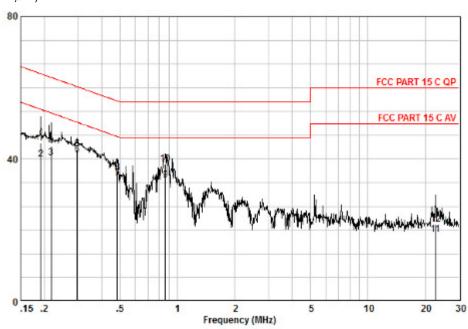
### 7.1.1 Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected. For EUT the communicating was worst case mode.

#### The following Quasi-Peak and Average measurements were performed on the EUT:

Neutral Line Level(dB  $\mu$  V)



#### Measure data:

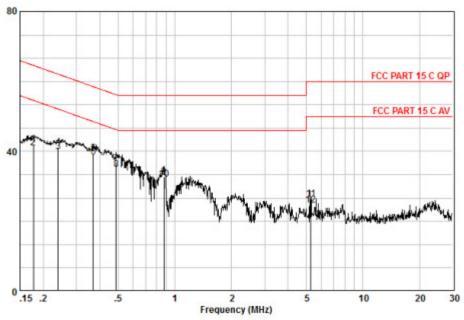
Freq	Read Level		LISN Factor	Level	Limit Line	Over Limit	Remark
MHz	₫₿ijŸ	d₿	d₿	−dBuV	dB∪V	dB	
0,191 0,191 0,217 0,217 0,297 0,297 0,484 0,862 0,862	34,73 30,31 30,71 33,97 33,03 31,53 24,97 26,54 24,52 29,03	0,09 0,08 0,08 0,06 0,06 0,04 0,04 0,01	9,57 9,56 9,56 9,56 9,56 9,54 9,56 9,56	44,38 39,96 40,35 43,61 42,65 41,15 34,55 36,12 34,09 38,60	53,98 52,92 62,92 60,32 50,32 46,27 56,27 46,00 56,00	-12.57 -19.31 -17.67 -9.17 -11.72 -20.15 -11.91 -17.40	AVERAGE AVERAGE QP QP AVERAGE AVERAGE QP AVERAGE QP
22,655 22,655	8,21 11.06	0,43 0,43	10,07 10.07	18,71 21.56		-38.44	AVERAGE OP



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#### Measure result:

Freq	Read Level	Cable Loss		Level	Limit Line	Over Limit	Remark
MHz	₫₿ijŸ	dB	d₿	dB∪V	₫₿ijŸ	dB	
0,177 0,177 0,240 0,240 0,369 0,489 0,489 0,876 0,876 5,297	32,37 31,25 30,08 31,34 29,70 28,57 26,72 25,10 22,92 22,35 16,40 14,63	0,09 0,08 0,08 0,05 0,05 0,04 0,04 0,01 0,01 0,22 0,22	9,69 9,69 9,70 9,69 9,69 9,71 9,70 9,70 9,76	42,15 41,03 39,85 41,11 39,44 38,31 36,47 34,85 32,63 32,06 26,38 24,61	54,64 52,08 62,08 58,52 48,52 56,19 46,19 56,00 46,00 60,00	-12,23 -20,97 -19,07 -10,20 -19,72 -11,34 -23,37 -13,94 -33,62	AVERAGE AVERAGE QP QP AVERAGE QP AVERAGE QP AVERAGE

-- End of Report--