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Report No.: SZEM141100618201
Page: 1 of 114

FCC 2.4G WIFI RF TEST REPORT

Application No: SZEM1411006182CR
Applicant: NVIDIA Corporation
Manufacturer: NVIDIA Corporation
Factory: MEGAFORCE CORP
Product Name: Development Platform
Model No.(EUT): P1860
Trade Mark: NVIDIA
FCC ID: VOB-P1860
Standards: 47 CFR Part 15, Subpart C (2014)
Date of Receipt: 2014-11-13
Date of Test: 2015-02-09 to 2015-02-15
Date of Issue: 2015-03-25

Test Result:	PASS *
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* In the configuration tested, the EUT complied with the standards specified above.
Authorized Signature:



Jack Zhang
EMC Laboratory Manager

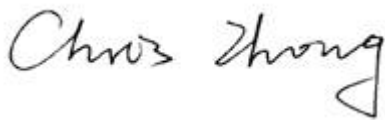
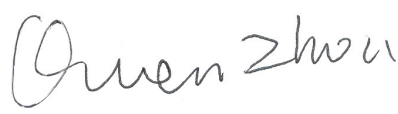
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2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
00		2015-03-25		Original

Authorized for issue by:				
Tested By		 (Chris Zhong) /Project Engineer		2015-02-15
				Date
Prepared By		 (Vivi Zhou) /Clerk		2015-03-25
				Date
Checked By		 (Owen Zhou) /Reviewer		2015-03-25



3 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15, Subpart C Section 15.203/15.247 (c)	ANSI C63.10 2009	PASS
AC Power Line Conducted Emission	47 CFR Part 15, Subpart C Section 15.207	ANSI C63.10 2009	PASS
Conducted Peak Output Power	47 CFR Part 15, Subpart C Section 15.247 (b)(3)	KDB558074 D01 v03r02	PASS
6dB Occupied Bandwidth	47 CFR Part 15, Subpart C Section 15.247 (a)(2)	KDB558074 D01 v03r02	PASS
Power Spectral Density	47 CFR Part 15, Subpart C Section 15.247 (e)	KDB558074 D01 v03r02	PASS
Band-edge for RF Conducted Emissions	47 CFR Part 15, Subpart C Section 15.247(d)	KDB558074 D01 v03r02	PASS
RF Conducted Spurious Emissions	47 CFR Part 15, Subpart C Section 15.247(d)	KDB558074 D01 v03r02	PASS
Radiated Spurious Emissions	47 CFR Part 15, Subpart C Section 15.205/15.209	ANSI C63.10 2009	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15, Subpart C Section 15.205/15.209	ANSI C63.10 2009	PASS





4 Contents

	Page
1 COVER PAGE.....	1
2 VERSION	2
3 TEST SUMMARY	3
4 CONTENTS	4
5 GENERAL INFORMATION.....	5
5.1 CLIENT INFORMATION	5
5.2 GENERAL DESCRIPTION OF EUT	5
5.3 TEST ENVIRONMENT AND MODE	7
5.4 DESCRIPTION OF SUPPORT UNITS	7
5.5 TEST LOCATION	8
5.6 TEST FACILITY	9
5.7 DEVIATION FROM STANDARDS	9
5.8 ABNORMALITIES FROM STANDARD CONDITIONS	9
5.9 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	9
5.10 EQUIPMENT LIST	10
6 TEST RESULTS AND MEASUREMENT DATA.....	13
6.1 ANTENNA REQUIREMENT.....	13
6.2 CONDUCTED EMISSIONS	15
6.3 CONDUCTED PEAK OUTPUT POWER	19
6.4 6dB OCCUPY BANDWIDTH	28
6.5 POWER SPECTRAL DENSITY	36
6.6 BAND-EDGE FOR RF CONDUCTED EMISSIONS	44
6.7 RF CONDUCTED SPURIOUS EMISSIONS	49
TEST PLOT AS FOLLOWS:.....	50
6.8 RADIATED SPURIOUS EMISSIONS.....	74
6.8.1 Radiated emission below 1GHz.....	77
6.8.2 Transmitter emission above 1GHz.....	79
6.9 RESTRICTED BANDS AROUND FUNDAMENTAL FREQUENCY	91
7 PHOTOGRAPHS.....	109
7.1 CONDUCTED EMISSION TEST SETUP.....	109
7.2 RADIATED DISTURBANCE(30MHZ-1GHZ) TEST SETUP	111
7.3 RADIATED DISTURBANCE(ABOVE 1GHZ) TEST SETUP	113
7.4 EUT CONSTRUCTIONAL DETAILS.....	114



5 General Information

5.1 Client Information

Applicant:	NVIDIA Corporation
Address of Applicant:	2701 San Tomas Expressway, Santa Clara, CA 95050, USA
Manufacturer:	NVIDIA Corporation
Address of Manufacturer:	2701 San Tomas Expressway, Santa Clara, CA 95050, USA
Factory:	MEGAFORCE CORP
Address of Factory:	2035 OTOOLE AVE, San Jose CA 95131-1301, USA

5.2 General Description of EUT

Product Name:	Development Platform
Model No.:	P1860
Trade Mark:	NVIDIA
Operation Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz IEEE 802.11n(HT40): 2422MHz to 2452MHz
Channel Numbers:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels IEEE 802.11n HT40: 7 Channels
Channel Separation:	5MHz
Type of Modulation:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g : OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20 and HT40) : OFDM (64QAM, 16QAM, QPSK,BPSK)
Sample Type:	Mobile production
Product Description:	Development Platform
Antenna Type:	Integral
Antenna Gain:	2.2dBi
Power Supply:	Input: AC100-240V 50/60Hz 1.2A Output: DC12V 6.25A MAX
EUT Cables & Ports:	AC cable: 140cm unshielded DC cable: 120cm unshielded with 2 ferrite core. USB cable: 150cm shielded



Operation Frequency each of channel(802.11b/g/n HT20)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		
Operation Frequency each of channel(802.11n HT40)							
Channel		Frequency		Channel		Frequency	
1		2422MHz		4		2437MHz	
2		2427MHz		5		2442MHz	
3		2432MHz		6		2447MHz	

Note:

1) In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

For 802.11b/g/n (HT20):

Channel	Frequency
The Lowest channel	2412MHz
The Middle channel	2437MHz
The Highest channel	2462MHz

For 802.11n (HT40):

Channel	Frequency
The Lowest channel	2422MHz
The Middle channel	2437MHz
The Highest channel	2452MHz

2) For all test, the duty cycle is 100%.



5.3 Test Environment and Mode

Operating Environment:	
Temperature:	25.0 °C
Humidity:	52 % RH
Atmospheric Pressure:	1020 mbar
Test mode:	
Transmitting mode:	Keep the EUT in transmitting mode with all kind of modulation and all kind of data rate.

5.4 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.
PC	DELL(Linux operating system)	PP18L



Cable:

No.	Description	Length	Screen
C1	Keyboard cable	150cm	Unshielded
C2	Mouse cable	120cm	Unshielded
C3	HDD USB cable	15cm	Unshielded
C7	Earphone	120cm	Unshielded
C9	HDMI cable	150cm	Unshielded
C10	Laptop DC cable	50cm	Unshielded with 1 ferrite core
C11	MITSUBISHI Television AC cable	120cm	Unshielded
C13	PC AC cable	120cm	Unshielded

Support units			
No.	Description	Manufacturer	Model No.
E-1	MITSUBISHI Television	MITSUBISHI	AX025
E-3	Removable hard disk	Supply by client	N/A
E-5	PC	Lenovo	T430u
E-6	Headphone	Supply by client	Unshielded
E-7	Keyboard	DELL	SK-8115
E-8	Mouse	Lenovo	MO28UOL
E-10	PC adapter	Lenovo	92P1158
E-11	USB stick	SanDisk	4G

5.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch E&E Lab,

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China.
518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.



5.6 Test Facility

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

- **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **VCCI**

The 10m Semi-anechoic chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-823, R-4188, T-1153 and C-2383 respectively.

- **FCC – Registration No.: 556682**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen 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 No.: 556682.

- **Industry Canada (IC)**

Two 3m Semi-anechoic chambers of SGS-CSTC Standards Technical Services Co., Ltd. have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1 & 4620C-2.

5.7 Deviation from Standards

None.

5.8 Abnormalities from Standard Conditions

None.

5.9 Other Information Requested by the Customer

None.

**5.10 Equipment List**

Conducted Emission					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd)
1	Shielding Room	ZhongYu Electron	GB-88	SEL0042	2015-06-10
2	LISN	Rohde & Schwarz	ENV216	SEL0152	2015-10-24
3	LISN	ETS-LINDGREN	3816/2	SEL0021	2015-05-16
4	8 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T8-02	SEL0162	2015-08-30
5	4 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T4-02	SEL0163	2015-08-30
6	2 Line ISN	Fischer Custom Communications Inc.	FCC-TLISN-T2-02	SEL0164	2015-08-30
7	EMI Test Receiver	Rohde & Schwarz	ESCI	SEL0022	2015-05-16
8	Coaxial Cable	SGS	N/A	SEL0025	2015-05-29
9	DC Power Supply	Zhao Xin	RXN-305D	SEL0117	2015-10-24
10	Humidity/ Temperature Indicator	Shanghai Qixiang Meteorological Industry Factory	ZJ1-2B	SEL0103	2015-10-24
11	Barometer	Chang Chun Meteorological Industry Factory	DYM3	SEL0088	2015-05-16



RE in Chamber					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd)
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2015-06-10
2	EMI Test Receiver	Agilent Technologies	N9038A	SEL0312	2015-09-16
3	EMI Test software	AUDIX	E3	SEL0050	N/A
4	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0015	2015-10-24
5	Double-ridged horn (1-18GHz)	ETS-LINDGREN	3117	SEL0006	2015-10-24
6	Horn Antenna (18-26GHz)	ETS-LINDGREN	3160	SEL0076	2015-10-24
7	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	2015-05-16
8	Pre-Amplifier (0.1-26.5GHz)	Compliance Directions Systems Inc.	PAP-0126	SEL0168	2015-10-24
9	Coaxial cable	SGS	N/A	SEL0027	2015-05-29
10	Coaxial cable	SGS	N/A	SEL0189	2015-05-29
11	Coaxial cable	SGS	N/A	SEL0121	2015-05-29
12	Coaxial cable	SGS	N/A	SEL0178	2015-05-29
13	Band filter	Amindeon	82346	SEL0094	2015-05-16
14	Barometer	Chang Chun Meteorological Industry Factory	DYM3	SEL0088	2015-05-16
15	DC Power Supply	Zhao Xin	RXN-305D	SEL0117	2015-10-24
16	Humidity/ Temperature Indicator	Shanghai Qixiang Meteorological Industry Factory	ZJ1-2B	SEL0103	2015-10-24
17	Signal Generator (10M-27GHz)	Rohde & Schwarz	SMR27	SEL0067	2015-05-16
18	Signal Generator	Rohde & Schwarz	SMY01	SEL0155	2015-10-24
19	Loop Antenna	Beijing Daze	ZN30401	SEL0203	2015-06-04



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Report No.: SZEM141100618201

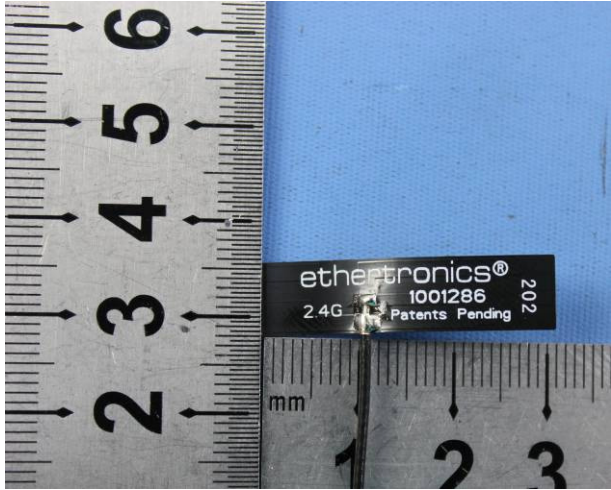
Page: 12 of 114

RF connected test					
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Due date (yyyy-mm-dd)
1	DC Power Supply	Zhao Xin	RXN-305D	SEL0117	2015-10-24
2	Humidity/ Temperature Indicator	HYGRO	ZJ1-2B	SEL0033	2015-10-24
3	Spectrum Analyzer	Rohde & Schwarz	FSP	SEL0154	2015-10-24
4	Coaxial cable	SGS	N/A	SEL0178	2015-05-29
5	Coaxial cable	SGS	N/A	SEL0179	2015-05-29
6	Barometer	ChangChun Meteorological Industry Factory	DYM3	SEL0088	2015-05-16
7	Signal Generator	Rohde & Schwarz	SML03	SEL0068	2015-05-16
8	Band filter	amideon	82346	SEL0094	2015-05-16
9	POWER METER	R & S	NRVS	SEL0144	2015-10-24
10	Attenuator	Beijin feihang taida	TST-2-6dB	SEL0205	2015-05-16
11	Power Divider(splitter)	Agilent Technologies	11636B	SEL0130	2015-10-24

Note: The calibration interval is one year, all the instruments are valid.

6 Test results and Measurement Data

6.1 Antenna Requirement

Standard requirement:	47 CFR Part 15C Section 15.203 /247(c)
15.203 requirement: 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. 15.247(b) (4) requirement: The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. 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.	
EUT Antenna:	



		
The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 2.2dBi.		



6.2 Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.207		
Test Method:	ANSI C63.10 2009		
Test Frequency Range:	150kHz to 30MHz		
Limit:	Frequency range (MHz)	Limit (dBuV)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
* Decreases with the logarithm of the frequency.			
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 50Ω/50μH + 5Ω 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. 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. 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 2009 on conducted measurement.		



Test Setup:	
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates at lowest, middle and highest channel. Transmitting mode.
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate of 802.11b at lowest channel is the worst case. Transmitting mode. Only the worst case is recorded in the report.
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass

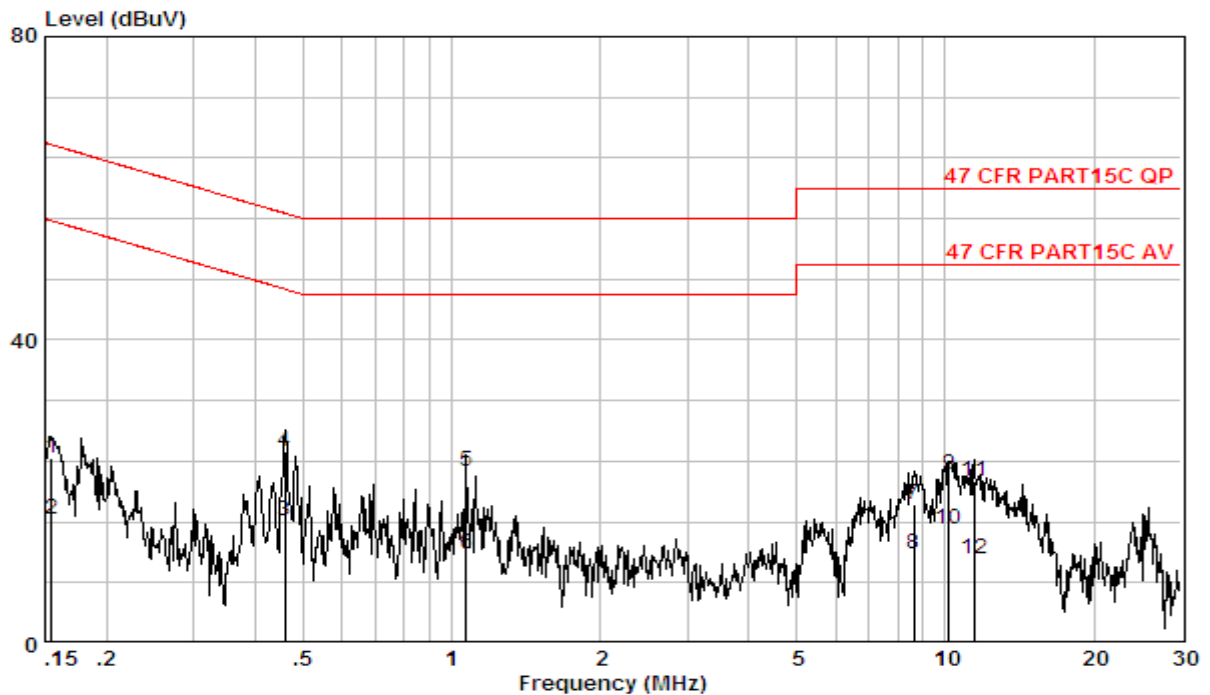


Measurement Data

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.

Live Line:

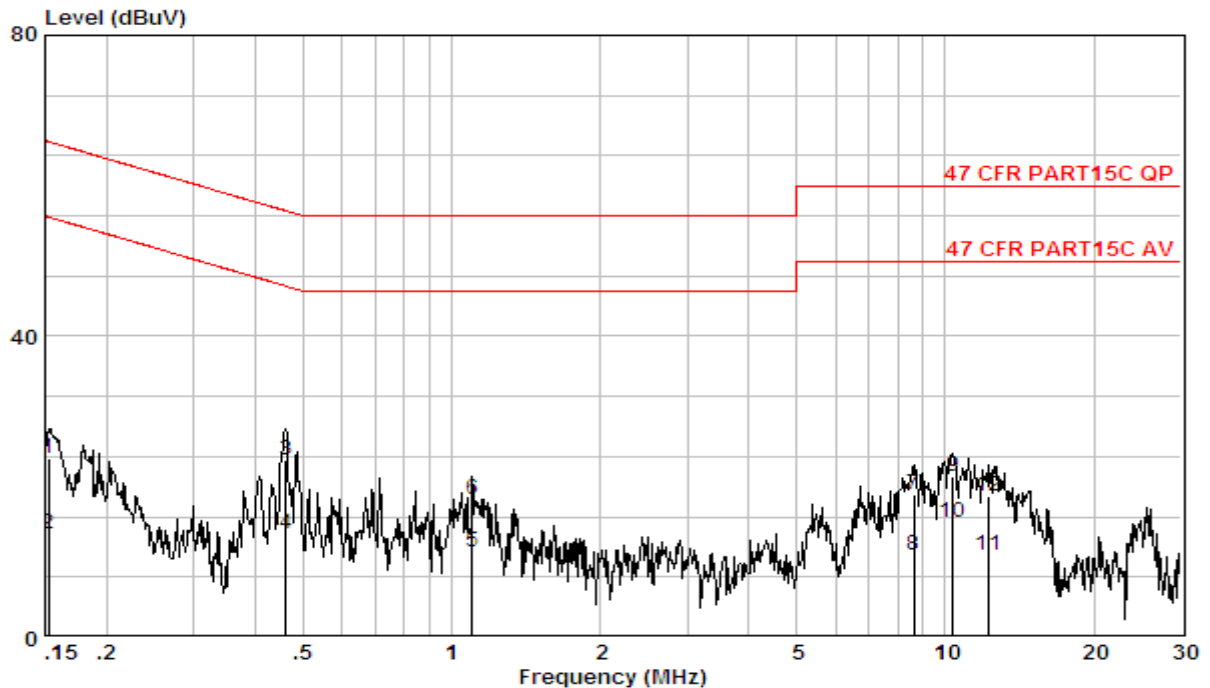


Site : Shielding Room
Condition : 47 CFR PART15C QP CE LINE
Job.No : 6182CR
Mode : TX mode

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15485	0.02	9.70	14.77	24.49	65.74	-41.24	QP
2	0.15485	0.02	9.70	6.58	16.30	55.74	-39.44	Average
3 @	0.45878	0.01	9.80	6.25	16.06	46.71	-30.66	Average
4 @	0.45878	0.01	9.80	15.50	25.31	56.71	-31.40	QP
5	1.071	0.02	9.80	12.83	22.65	56.00	-33.35	QP
6	1.071	0.02	9.80	2.06	11.88	46.00	-34.12	Average
7	8.637	0.01	9.90	8.49	18.40	60.00	-41.60	QP
8	8.637	0.01	9.90	1.85	11.76	50.00	-38.24	Average
9	10.179	0.01	9.91	12.28	22.20	60.00	-37.80	QP
10	10.179	0.01	9.91	5.13	15.05	50.00	-34.95	Average
11	11.438	0.01	9.96	11.37	21.35	60.00	-38.65	QP
12	11.438	0.01	9.96	1.15	11.12	50.00	-38.88	Average



Neutral Line:



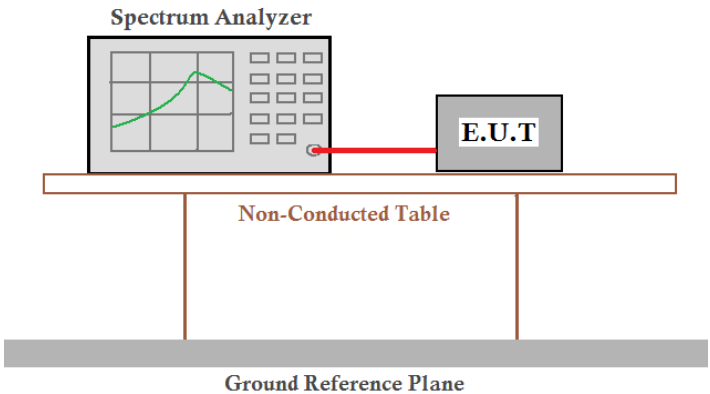
Site : Shielding Room
Condition : 47 CFR PART15C QP CE NEUTRAL
Job.No : 6182CR
Mode : TX mode

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15240	0.02	9.70	14.07	23.79	65.87	-42.08	QP
2	0.15240	0.02	9.70	3.91	13.63	55.87	-42.24	Average
3	0.46122	0.01	9.80	13.71	23.52	56.67	-33.15	QP
4	0.46122	0.01	9.80	3.91	13.72	46.67	-32.95	Average
5	1.100	0.02	9.80	1.61	11.43	46.00	-34.57	Average
6	1.100	0.02	9.80	8.59	18.41	56.00	-37.59	QP
7	8.637	0.01	10.00	9.03	19.04	60.00	-40.96	QP
8	8.637	0.01	10.00	0.97	10.98	50.00	-39.02	Average
9	10.342	0.01	10.00	11.29	21.30	60.00	-38.70	QP
10	10.342	0.01	10.00	5.32	15.33	50.00	-34.67	Average
11	12.188	0.01	10.00	0.95	10.96	50.00	-39.04	Average
12	12.188	0.01	10.00	8.68	18.70	60.00	-41.30	QP

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.

6.3 Conducted Peak Output Power

Test Requirement:	47 CFR Part 15C Section 15.247 (b)(3)
Test Method:	KDB558074 D01 v03r02
Test Setup:	 <i>Remark:</i> Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.
Test Instruments:	Refer to section 5.10 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g ; 6.5Mbps of rate is the worst case of 802.11n(HT20) ; 13.5Mbps of rate is the worst case of 802.11n(HT40)
Limit:	30dBm
Test Results:	Pass



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Report No.: SZEM141100618201

Page: 20 of 114

Pre-scan under all rate at lowest channel 1								
Mode	802.11b							
Data Rate	1Mbps	2Mbps	5.5Mbps	11Mbps				
Power (dBm)	19.45	18.82	18.94	18.73				
Mode	802.11g							
Data Rate	6Mbps	9Mbps	12Mbps	18Mbps	24Mbps	36Mbps	48Mbps	54Mbps
Power (dBm)	19.32	18.26	18.42	18.40	19.01	18.50	18.52	18.58
Mode	802.11n(HT20)							
Data Rate	6.5Mbps	13Mbps	19.5Mbps	26Mbps	39Mbps	52Mbps	58.5Mbps	65Mbps
Power (dBm)	17.77	17.56	17.54	16.92	16.82	16.83	16.92	17.02
Mode	802.11n(HT40)							
Data Rate	13.5Mbps	27Mbps	40.5Mbps	54Mbps	81Mbps	108Mbps	121.5Mbps	135Mbps
Power (dBm)	18.00	17.63	17.22	17.43	17.23	17.83	17.82	17.52
Through Pre-scan, 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20); 13.5Mbps of rate is the worst case of 802.11n(HT40).								

**Measurement Data**

802.11b mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	19.45	30.00	Pass
Middle	19.65	30.00	Pass
Highest	19.87	30.00	Pass
802.11g mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	19.32	30.00	Pass
Middle	19.70	30.00	Pass
Highest	20.17	30.00	Pass
802.11n(HT20)mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	17.77	30.00	Pass
Middle	17.99	30.00	Pass
Highest	17.97	30.00	Pass
802.11n(HT40)mode			
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
Lowest	18.00	30.00	Pass
Middle	18.27	30.00	Pass
Highest	18.20	30.00	Pass



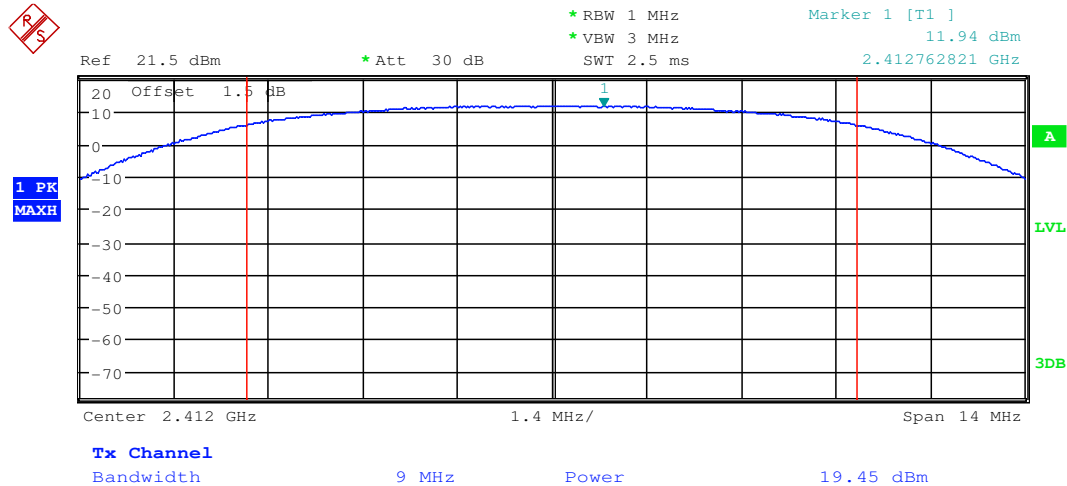
SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

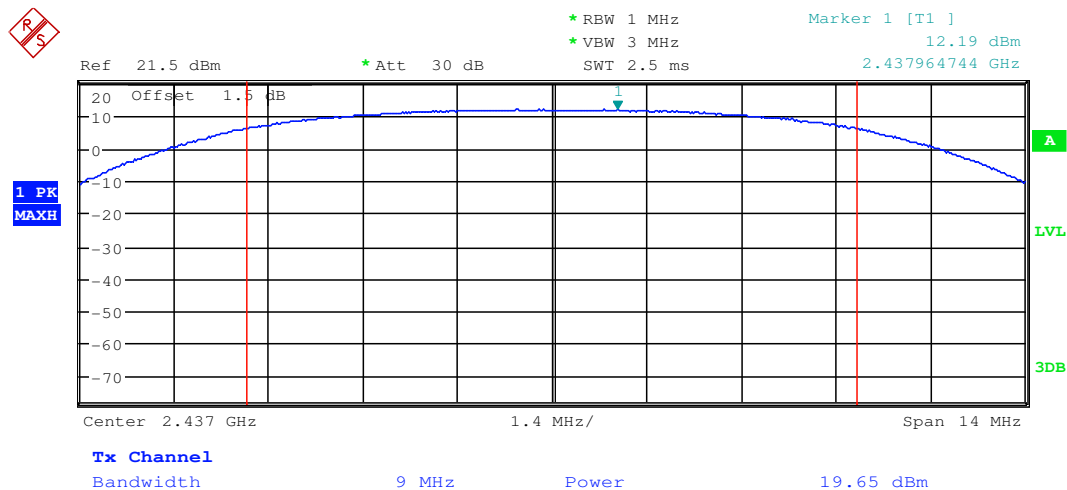
Page: 22 of 114

Test plot as follows:

Test mode:	802.11b	Test channel:	Lowest
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Test mode:	802.11b	Test channel:	Middle
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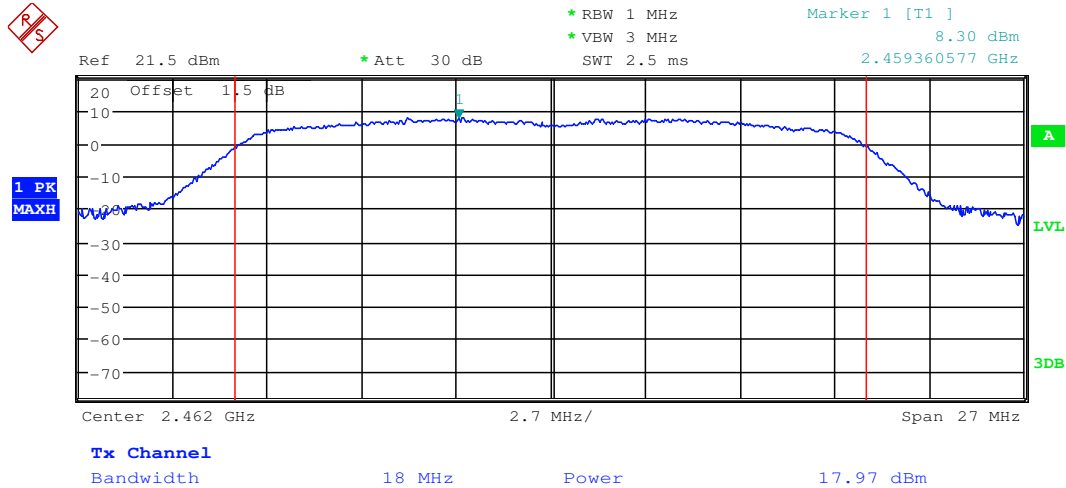


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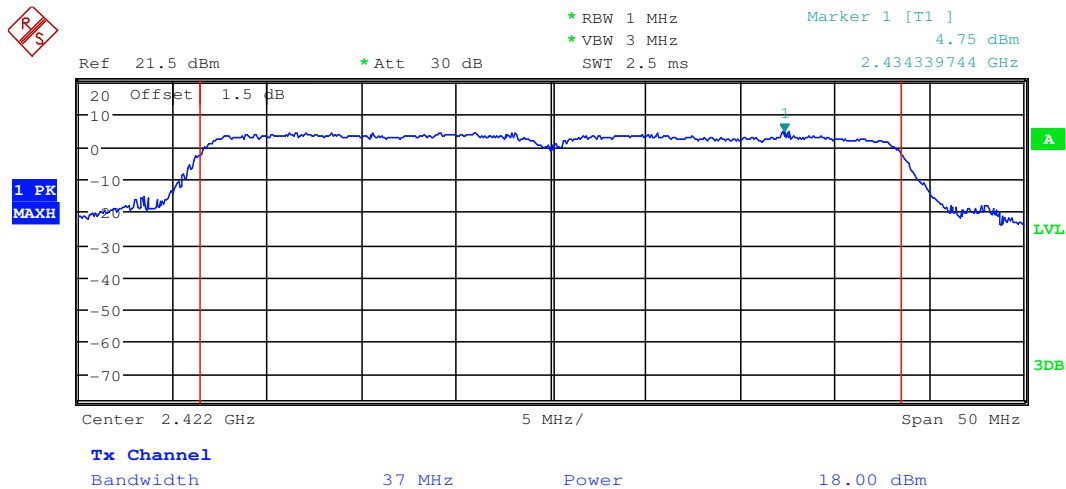
Report No.: SZEM141100618201

Page: 26 of 114

Test mode:	802.11n(HT20)	Test channel:	Highest
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Test mode:	802.11n(HT40)	Test channel:	Lowest
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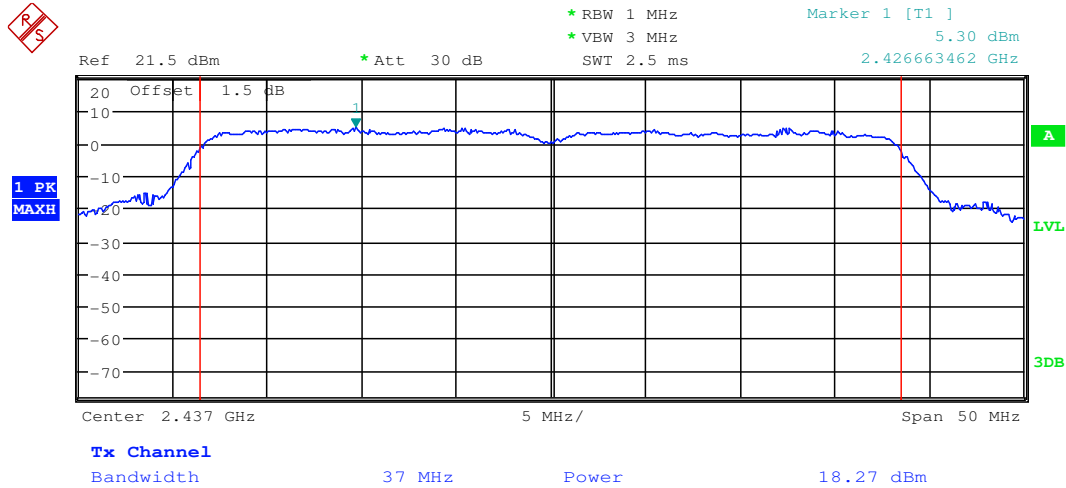


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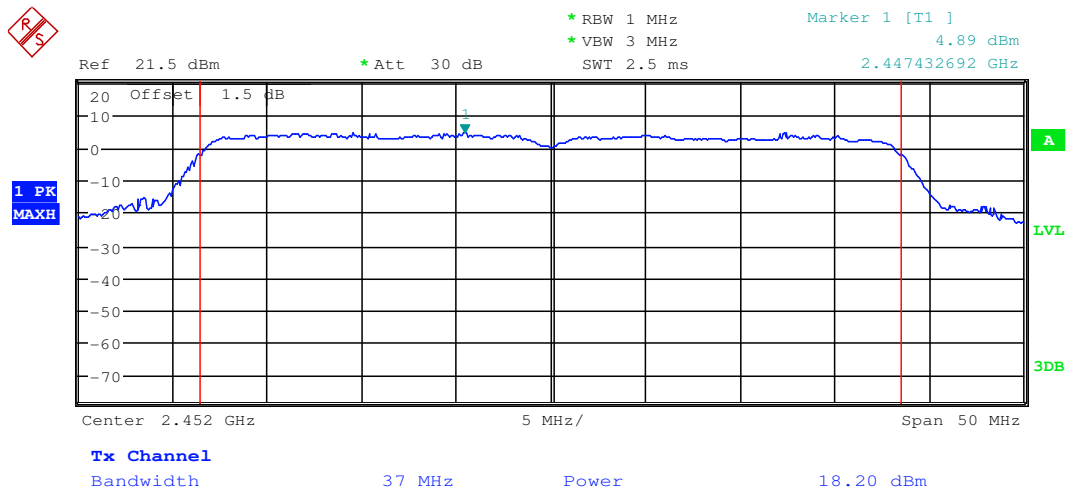
Report No.: SZEM141100618201

Page: 27 of 114

Test mode:	802.11n(HT40)	Test channel:	Middle
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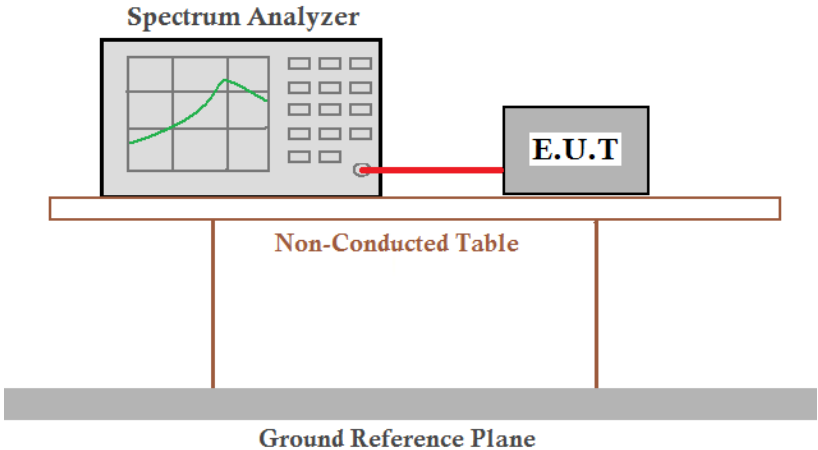


Test mode:	802.11n(HT40)	Test channel:	Highest
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6.4 6dB Occupy Bandwidth

Test Requirement:	47 CFR Part 15C Section 15.247 (a)(2)
Test Method:	KDB558074 D01 v03r02
Test Setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. The table is supported by two vertical legs. Below the table is a Ground Reference Plane.
Instruments Used:	Refer to section 5.10 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g ; 6.5Mbps of rate is the worst case of 802.11n(HT20) ; 13.5Mbps of rate is the worst case of 802.11n(HT40)
Limit:	≥ 500 kHz
Test Results:	Pass

**Measurement Data**

802.11b mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	8.413	≥500	Pass
Middle	8.606	≥500	Pass
Highest	8.798	≥500	Pass
802.11g mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	16.442	≥500	Pass
Middle	16.442	≥500	Pass
Highest	16.490	≥500	Pass
802.11n(HT20) mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	17.067	≥500	Pass
Middle	17.019	≥500	Pass
Highest	17.067	≥500	Pass
802.11n(HT40)mode			
Test channel	6dB Occupy Bandwidth (MHz)	Limit (kHz)	Result
Lowest	36.619	≥500	Pass
Middle	36.683	≥500	Pass
Highest	36.587	≥500	Pass



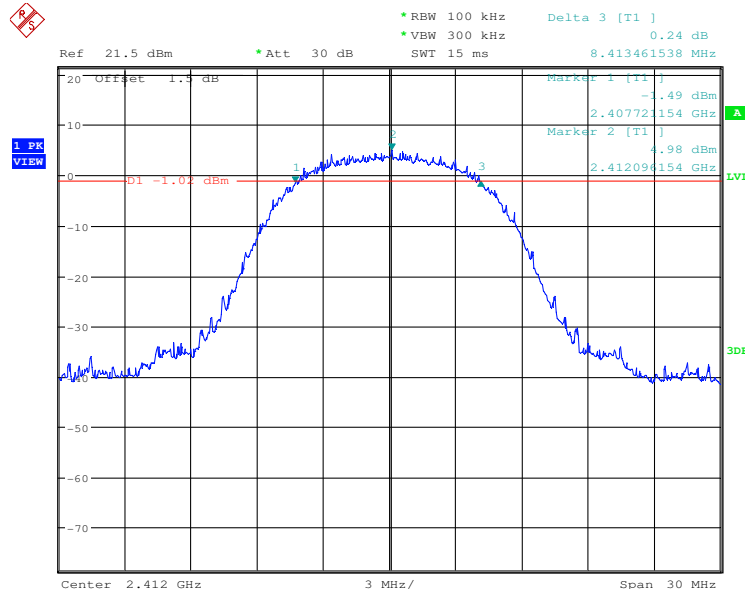
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Report No.: SZEM141100618201

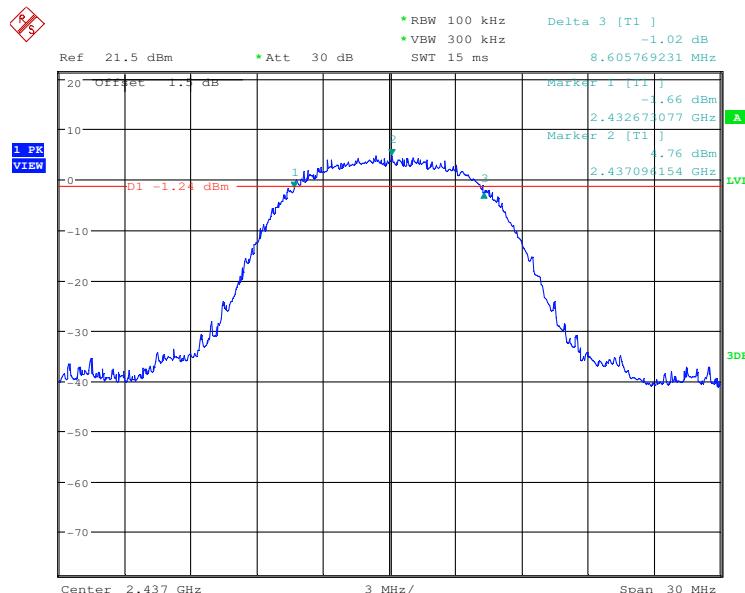
Page: 30 of 114

Test plot as follows:

Test mode:	802.11b	Test channel:	Lowest
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Test mode:	802.11b	Test channel:	Middle
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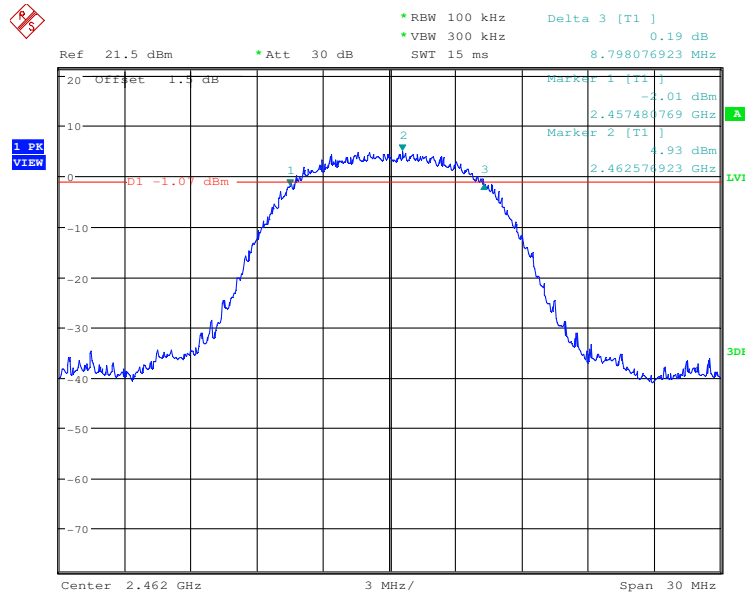


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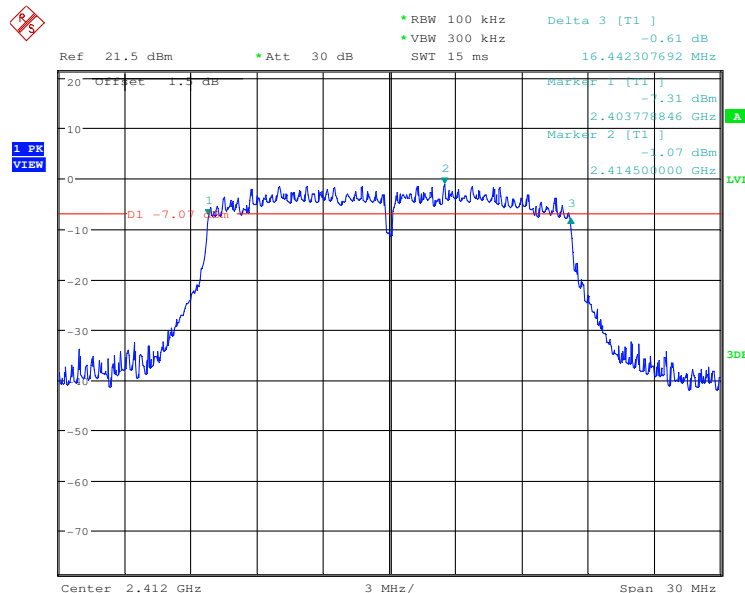
Report No.: SZEM141100618201

Page: 31 of 114

Test mode:	802.11b	Test channel:	Highest
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Test mode:	802.11g	Test channel:	Lowest
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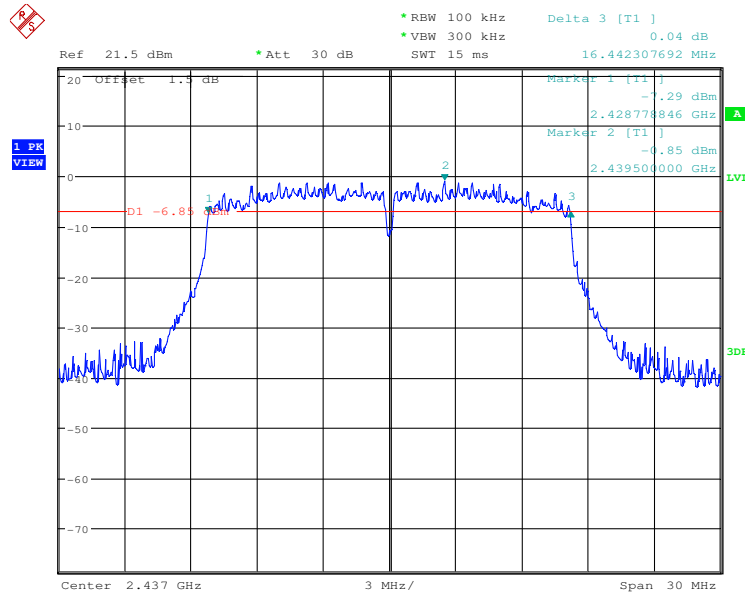


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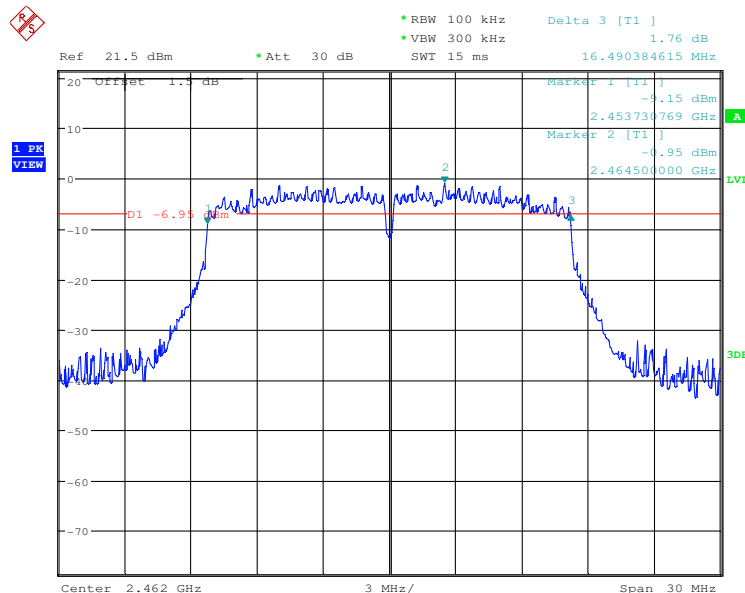
Report No.: SZEM141100618201

Page: 32 of 114

Test mode:	802.11g	Test channel:	Middle
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Test mode:	802.11g	Test channel:	Highest
------------	---------	---------------	---------



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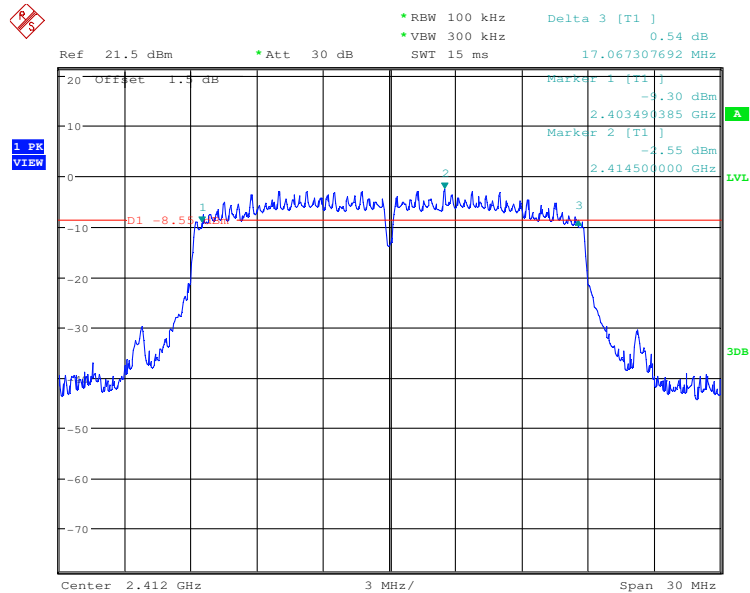


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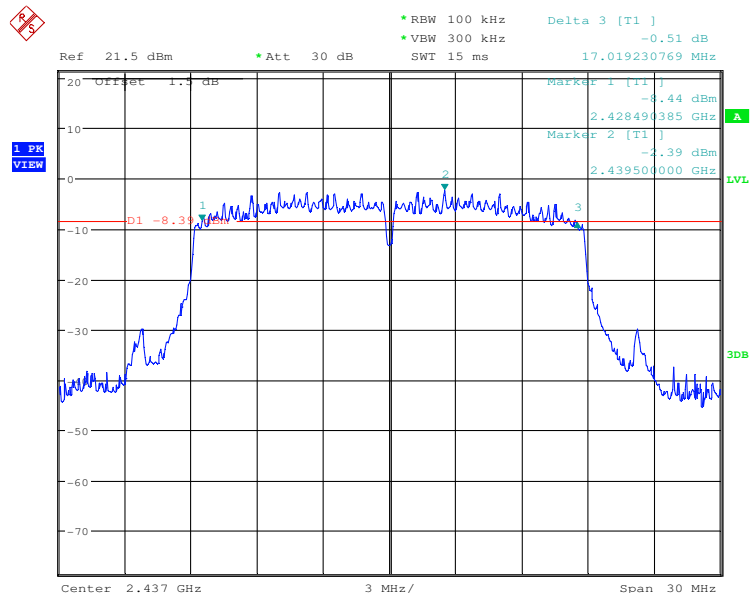
Report No.: SZEM141100618201

Page: 33 of 114

Test mode:	802.11n(HT20)	Test channel:	Lowest
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Test mode:	802.11n(HT20)	Test channel:	Middle
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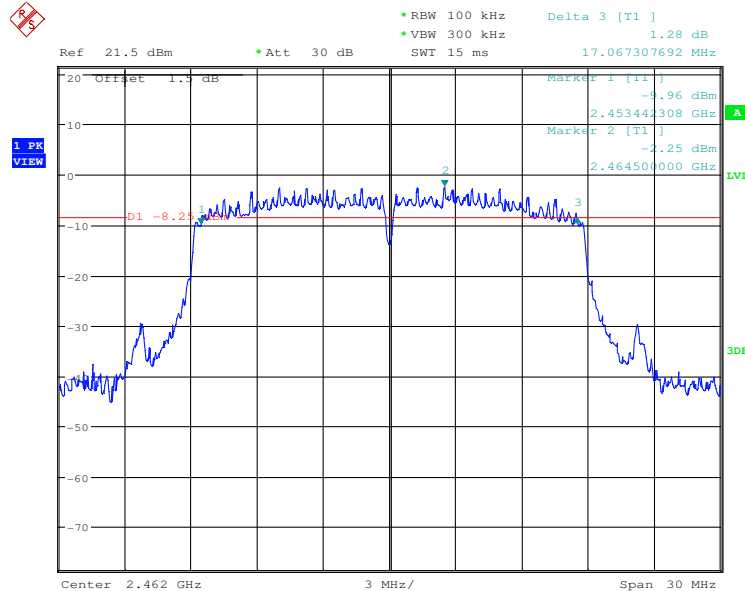


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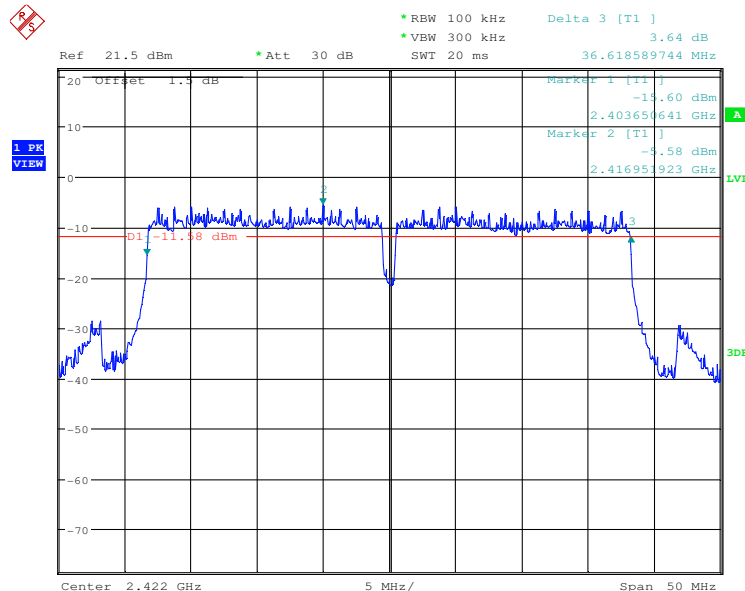
Report No.: SZEM141100618201

Page: 34 of 114

Test mode:	802.11n(HT20)	Test channel:	Highest
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Test mode:	802.11n(HT40)	Test channel:	Lowest
------------	---------------	---------------	--------



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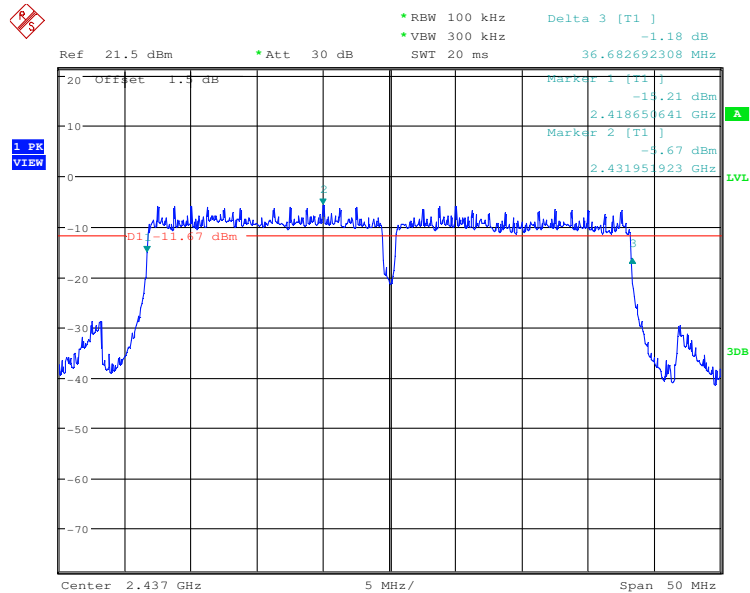


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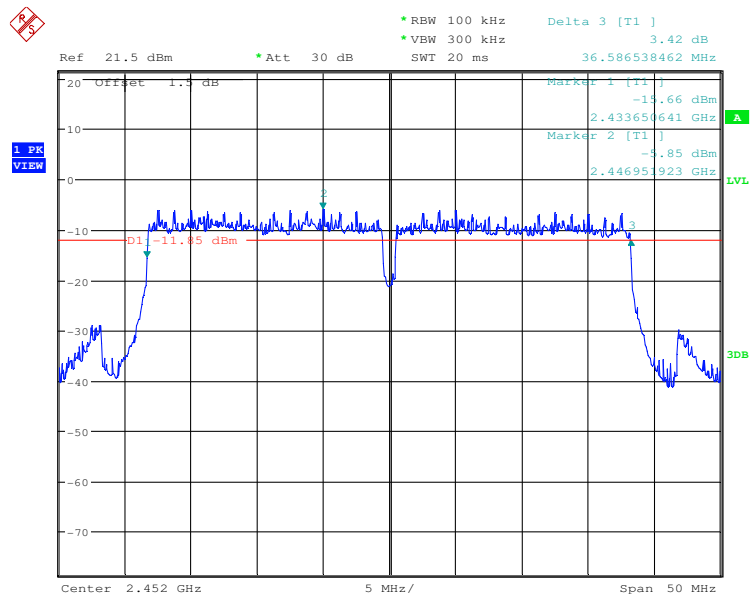
Report No.: SZEM141100618201

Page: 35 of 114

Test mode:	802.11n(HT40)	Test channel:	Middle
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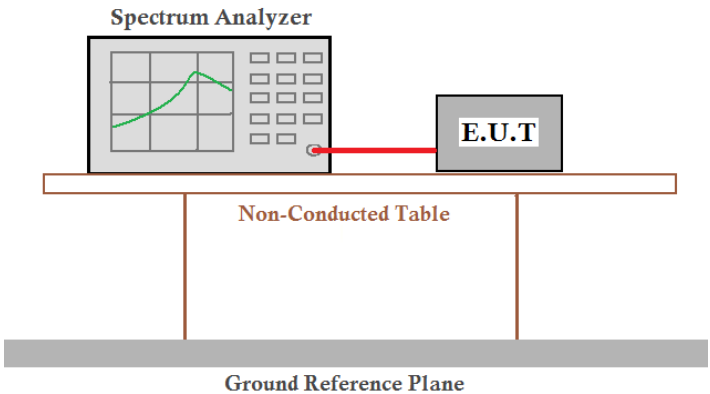


Test mode:	802.11n(HT40)	Test channel:	Highest
------------	---------------	---------------	---------



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6.5 Power Spectral Density

Test Requirement:	47 CFR Part 15C Section 15.247 (e)
Test Method:	KDB558074 D01 v03r02
Test Setup:	 <i>Remark:</i> Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.
Test Instruments:	Refer to section 5.10 for details
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g ; 6.5Mbps of rate is the worst case of 802.11n(HT20) ; 13.5Mbps of rate is the worst case of 802.11n(HT40)
Limit:	≤8.00dBm/3kHz
Test Results:	Pass

**Measurement Data**

802.11b mode			
Test channel	Power Spectral Density (dBm/3KHz)	Limit (dBm/3kHz)	Result
Lowest	-10.72	≤8.00	Pass
Middle	-10.11	≤8.00	Pass
Highest	-9.61	≤8.00	Pass
802.11g mode			
Test channel	Power Spectral Density (dBm)	Limit (dBm/3kHz)	Result
Lowest	-15.95	≤8.00	Pass
Middle	-15.04	≤8.00	Pass
Highest	-15.17	≤8.00	Pass
802.11n(HT20) mode			
Test channel	Power Spectral Density (dBm)	Limit (dBm/3kHz)	Result
Lowest	-16.65	≤8.00	Pass
Middle	-18.05	≤8.00	Pass
Highest	-16.29	≤8.00	Pass
802.11n(HT40) mode			
Test channel	Power Spectral Density (dBm)	Limit (dBm/3kHz)	Result
Lowest	-20.78	≤8.00	Pass
Middle	-20.14	≤8.00	Pass
Highest	-19.88	≤8.00	Pass



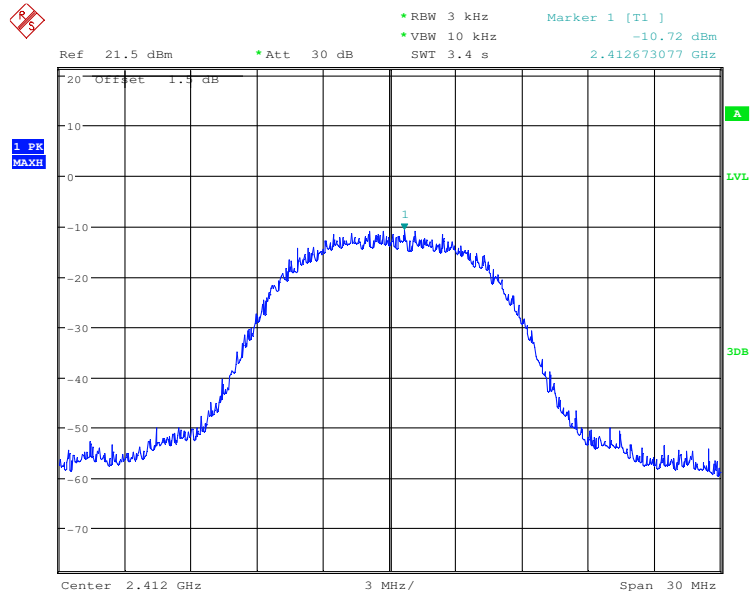
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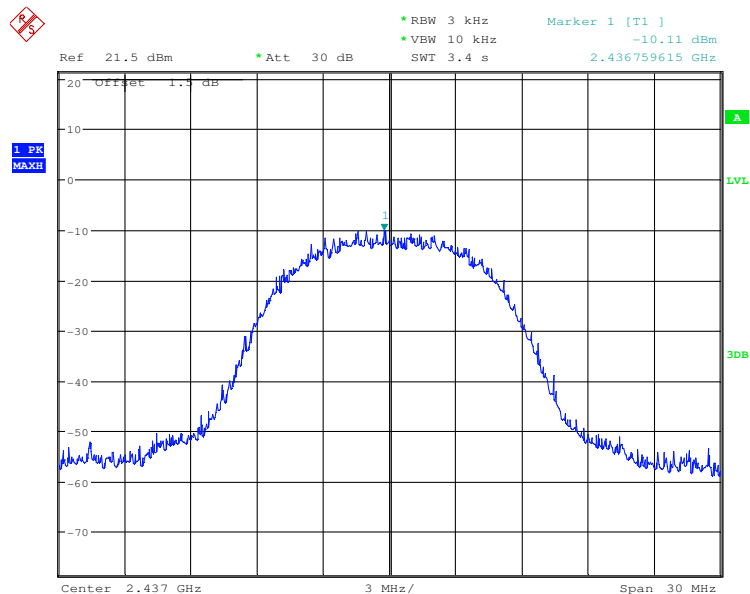
Page: 38 of 114

Test plot as follows:

Test mode:	802.11b	Test channel:	Lowest
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Test mode:	802.11b	Test channel:	Middle
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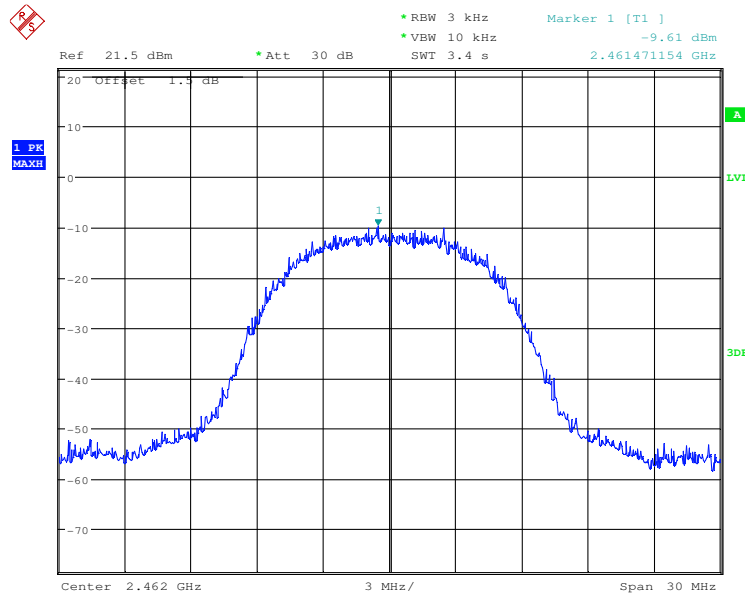


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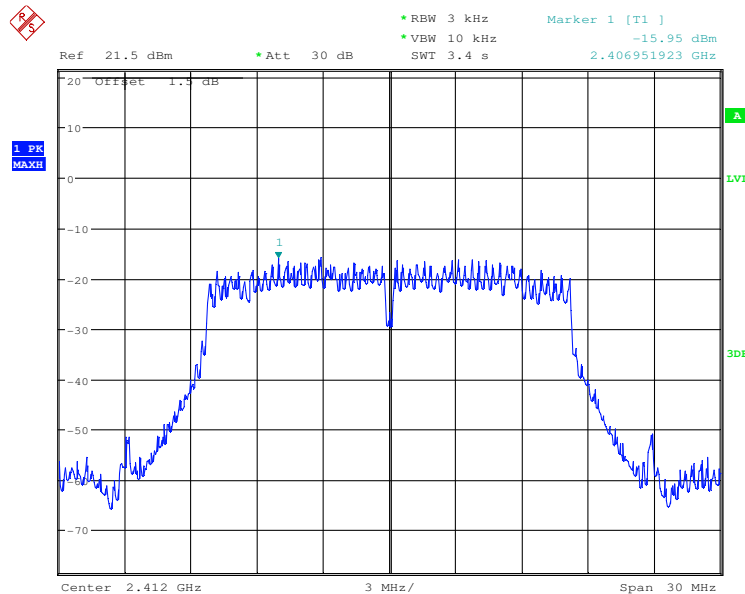
Report No.: SZEM141100618201

Page: 39 of 114

Test mode:	802.11b	Test channel:	Highest
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Test mode:	802.11g	Test channel:	Lowest
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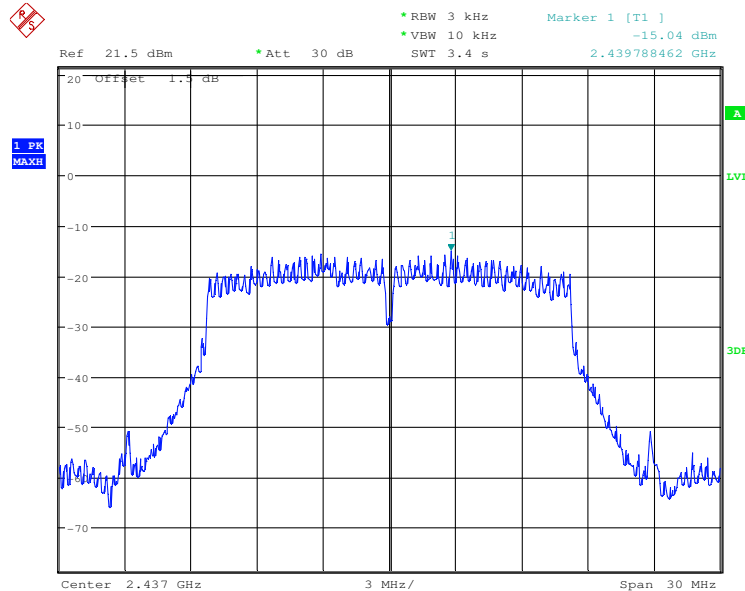


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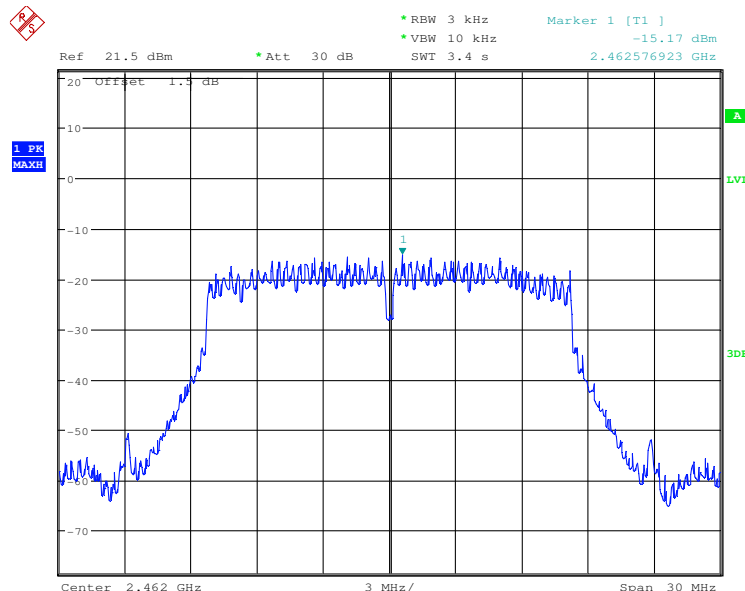
Report No.: SZEM141100618201

Page: 40 of 114

Test mode:	802.11g	Test channel:	Middle
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Test mode:	802.11g	Test channel:	Highest
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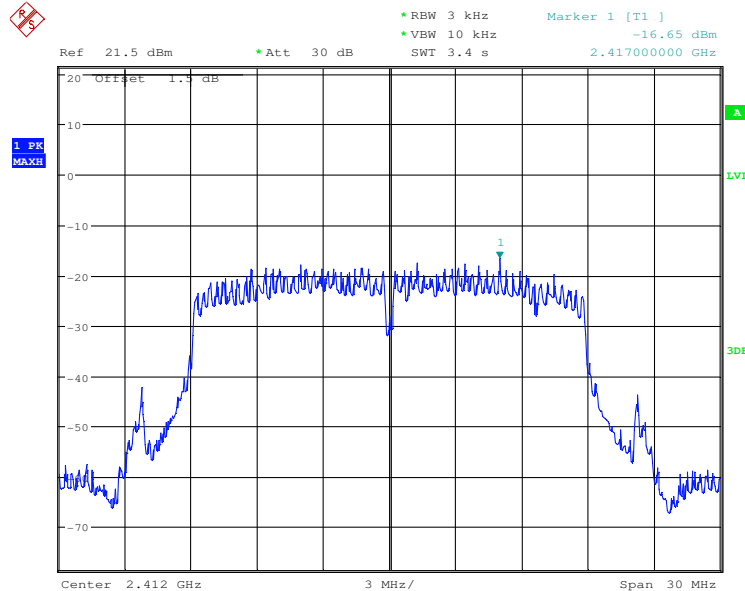


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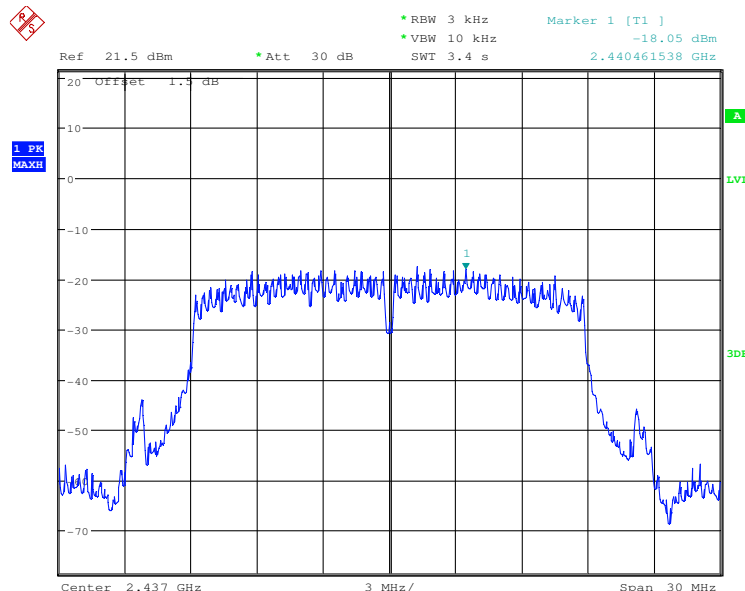
Report No.: SZEM141100618201

Page: 41 of 114

Test mode:	802.11n (HT20)	Test channel:	Lowest
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Test mode:	802.11n (HT20)	Test channel:	Middle
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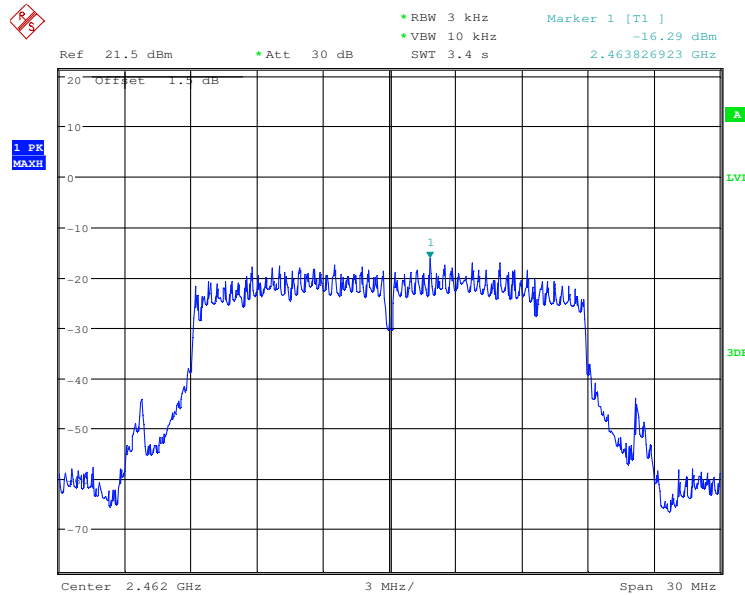


SGS-CSTC Standards Technical Services Ltd.

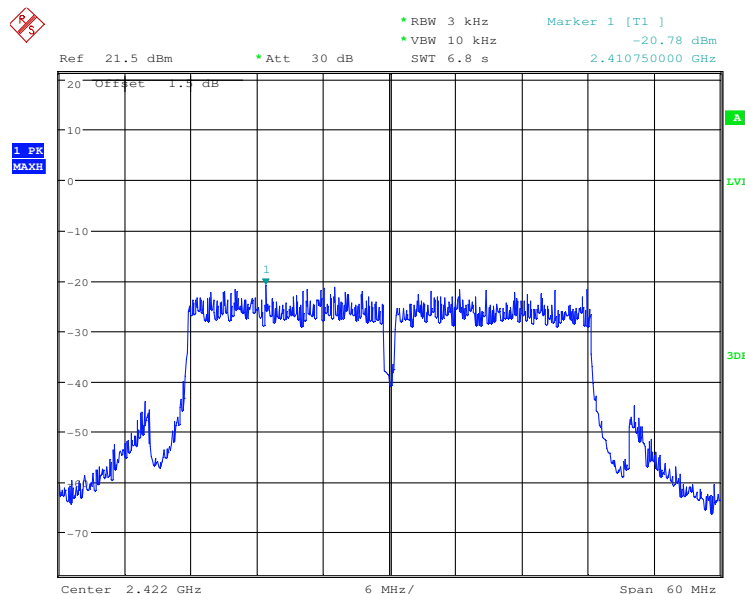
Report No.: SZEM141100618201

Page: 42 of 114

Test mode:	802.11n (HT20)	Test channel:	Highest
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Test mode:	802.11n (HT40)	Test channel:	Lowest
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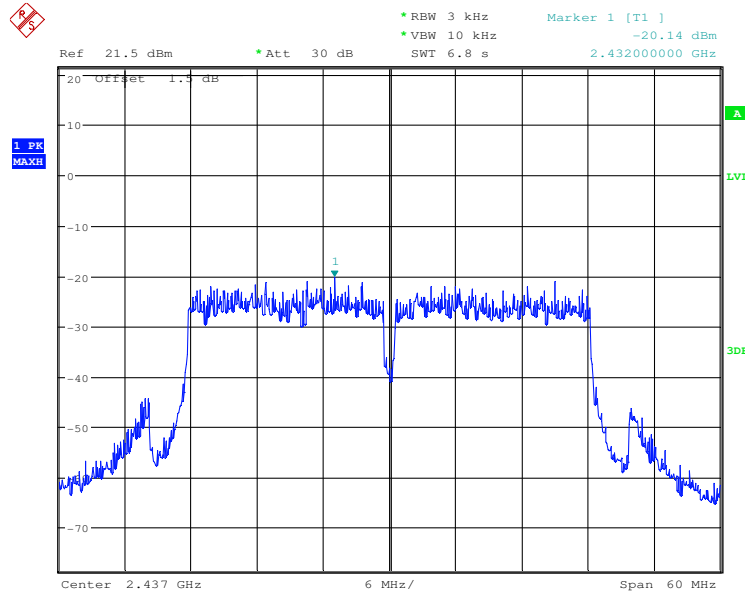


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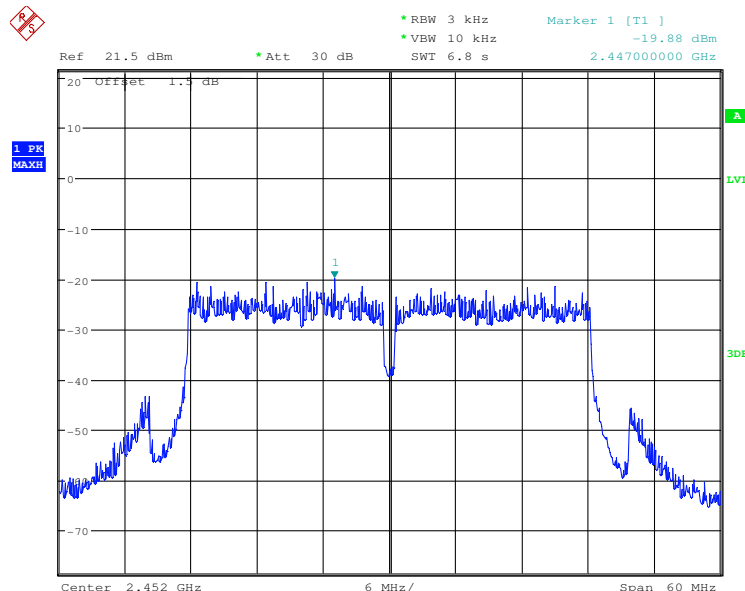
Report No.: SZEM141100618201

Page: 43 of 114

Test mode:	802.11n (HT40)	Test channel:	Middle
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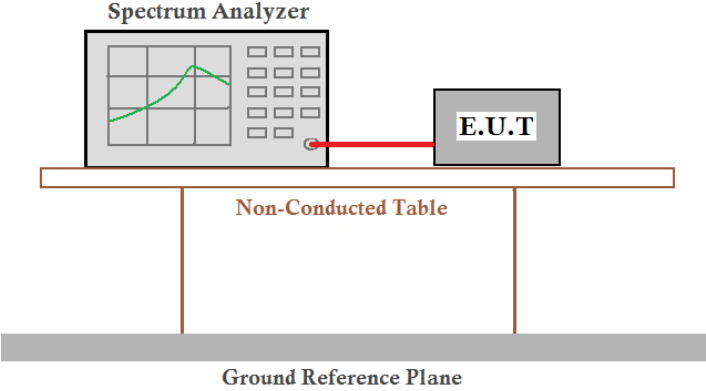


Test mode:	802.11n (HT40)	Test channel:	Highest
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6.6 Band-edge for RF Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	KDB558074 D01 v03r02
Test Setup:	 <i>Remark:</i> Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g ; 6.5Mbps of rate is the worst case of 802.11n(HT20) ; 13.5Mbps of rate is the worst case of 802.11n(HT40)
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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.
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass



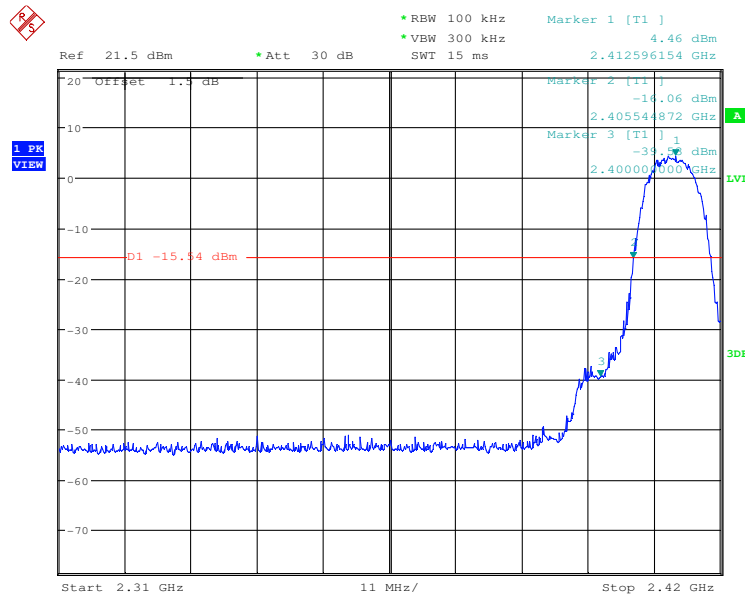
SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

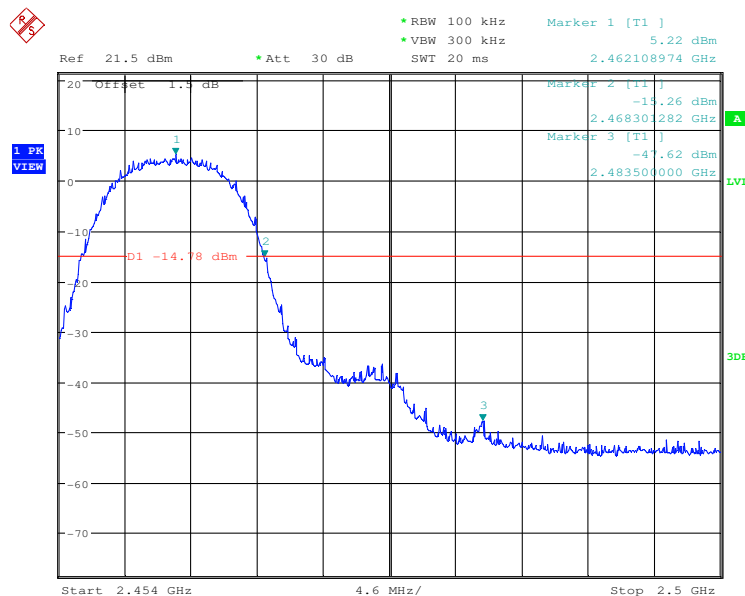
Page: 45 of 114

Test plot as follows:

Test mode:	802.11b	Test channel:	Lowest
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Test mode:	802.11b	Test channel:	Highest
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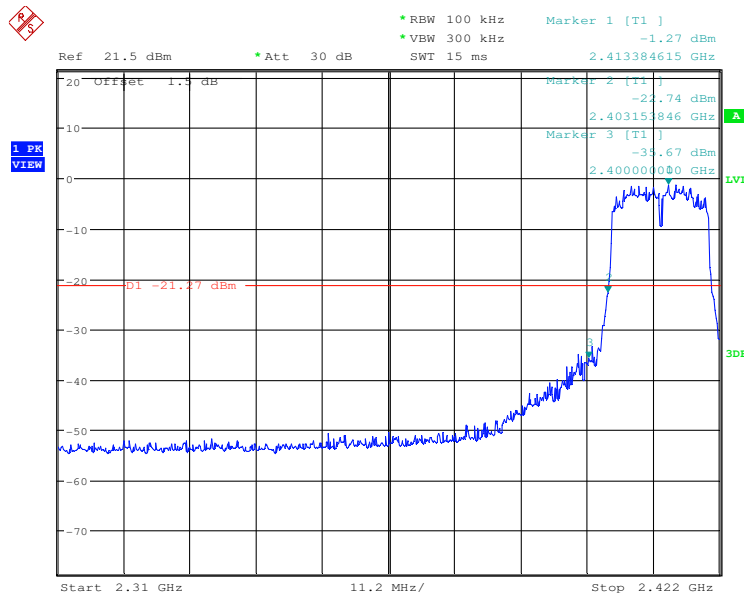


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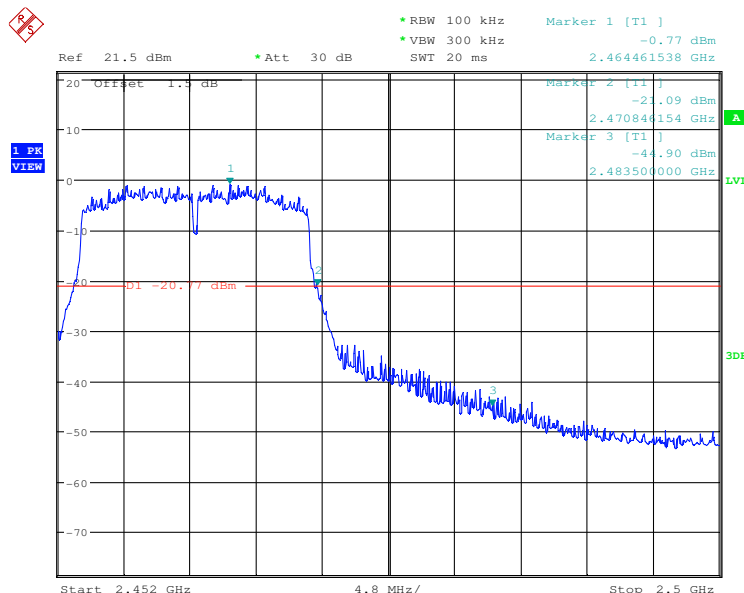
Report No.: SZEM141100618201

Page: 46 of 114

Test mode:	802.11g	Test channel:	Lowest
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Test mode:	802.11g	Test channel:	Highest
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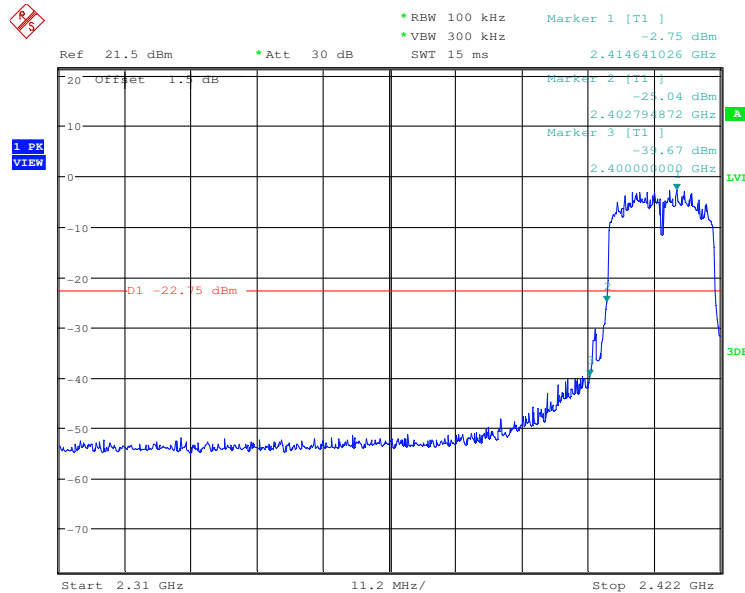


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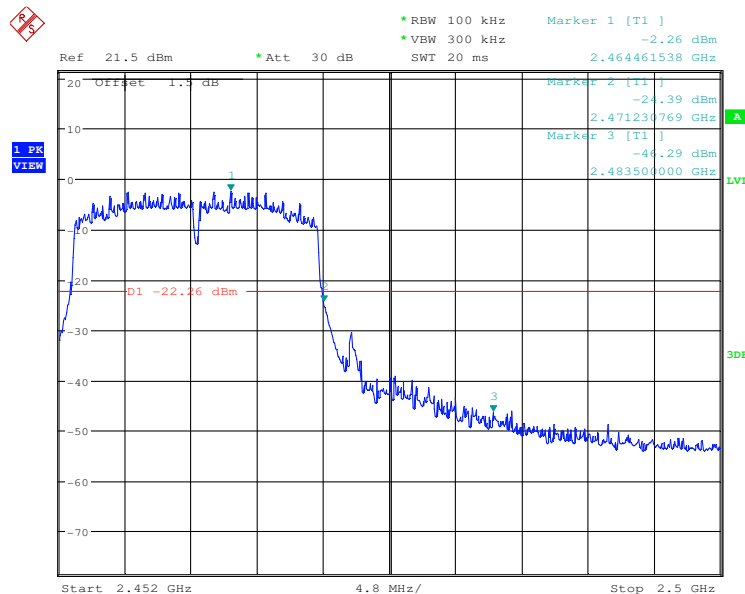
Report No.: SZEM141100618201

Page: 47 of 114

Test mode:	802.11n (HT20)	Test channel:	Lowest
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Test mode:	802.11n (HT20)	Test channel:	Highest
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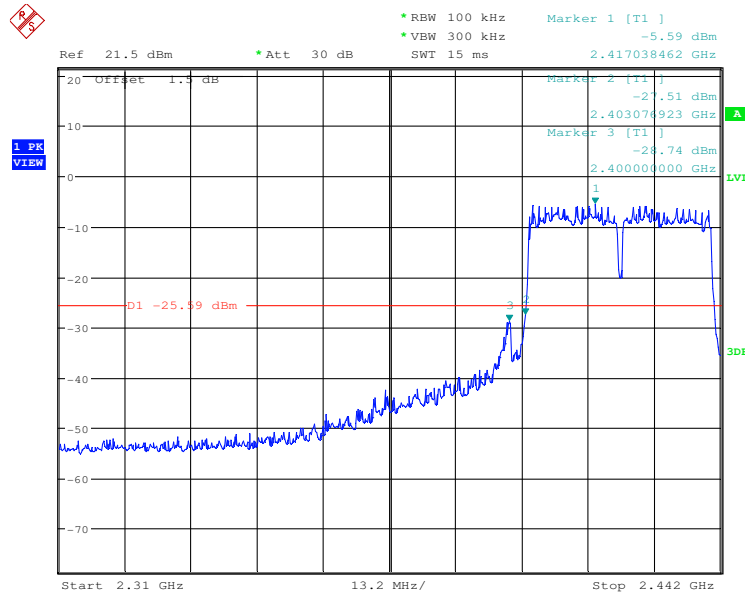


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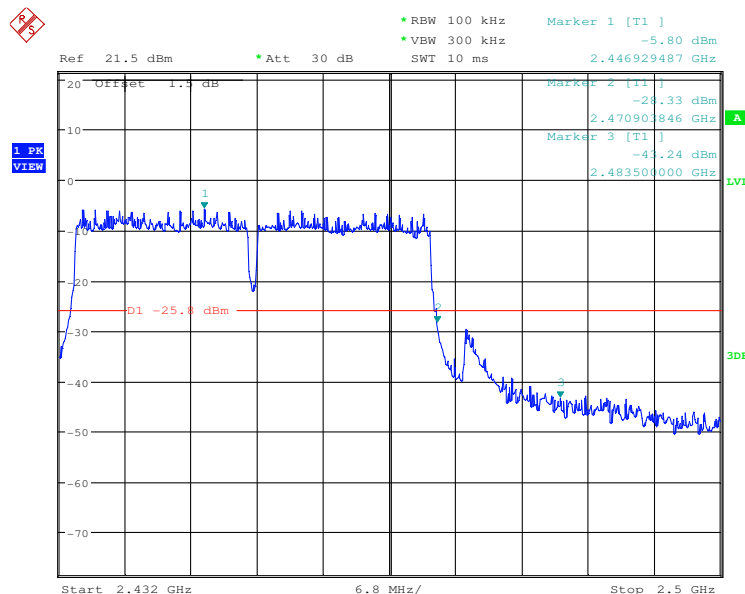
Report No.: SZEM141100618201

Page: 48 of 114

Test mode:	802.11n (HT40)	Test channel:	Lowest
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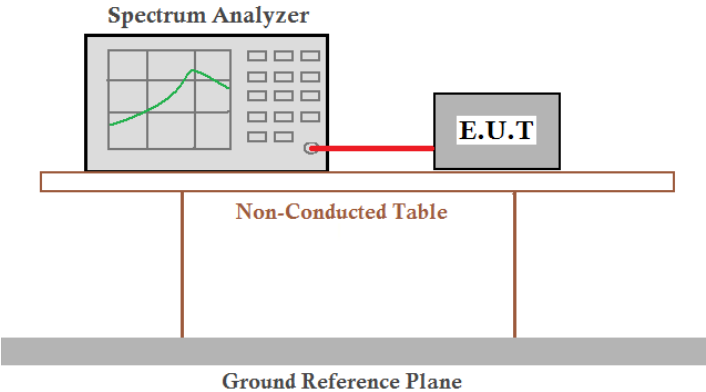


Test mode:	802.11n (HT40)	Test channel:	Highest
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6.7 RF Conducted Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	KDB558074 D01 v03r02
Test Setup:	 <i>Remark:</i> Offset the High-Frequency cable loss 1.5dB in the spectrum analyzer.
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates
Final Test Mode:	Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g ; 6.5Mbps of rate is the worst case of 802.11n(HT20) ; 13.5Mbps of rate is the worst case of 802.11n(HT40)
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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.
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass



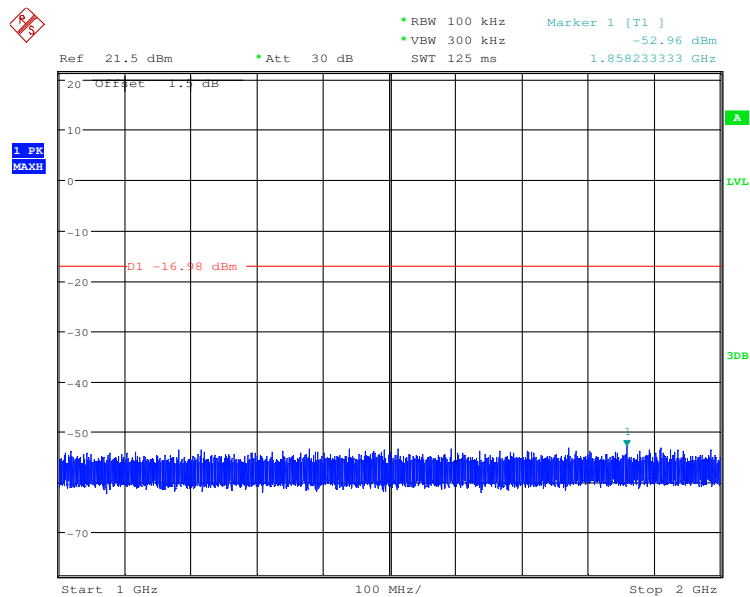
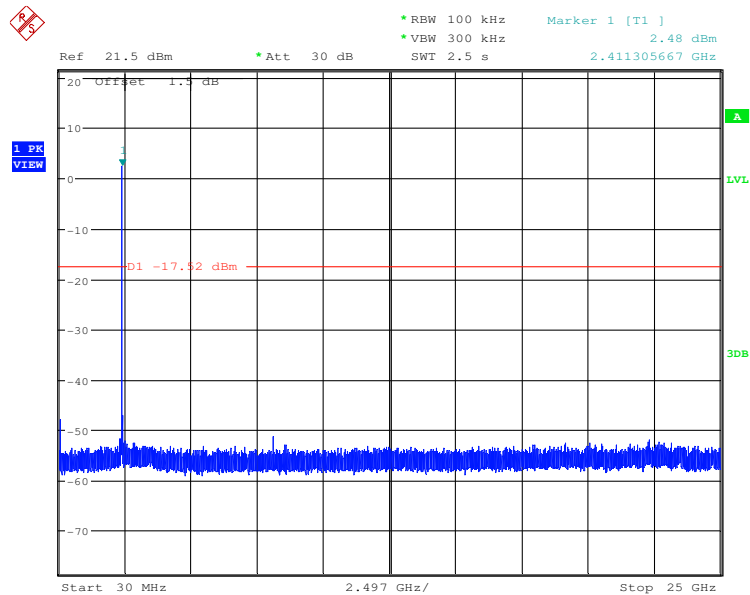
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Report No.: SZEM141100618201

Page: 50 of 114

Test plot as follows:

Test mode:	802.11b	Test channel:	Lowest
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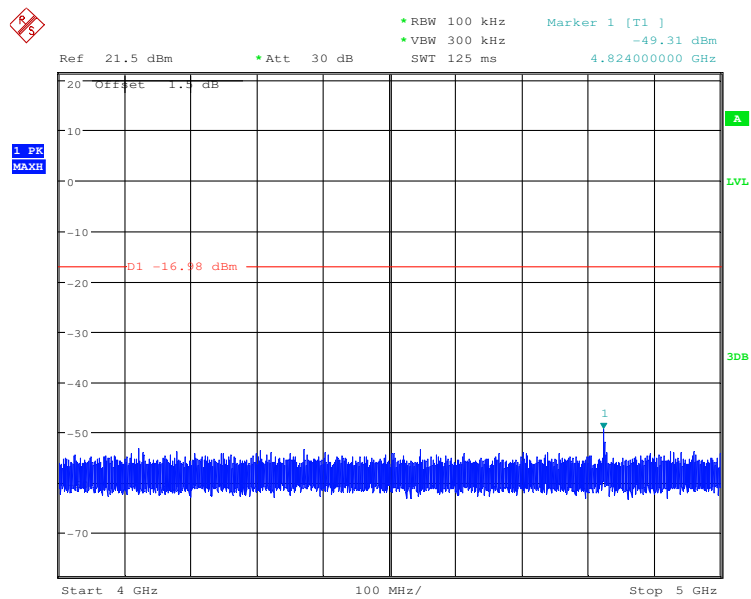
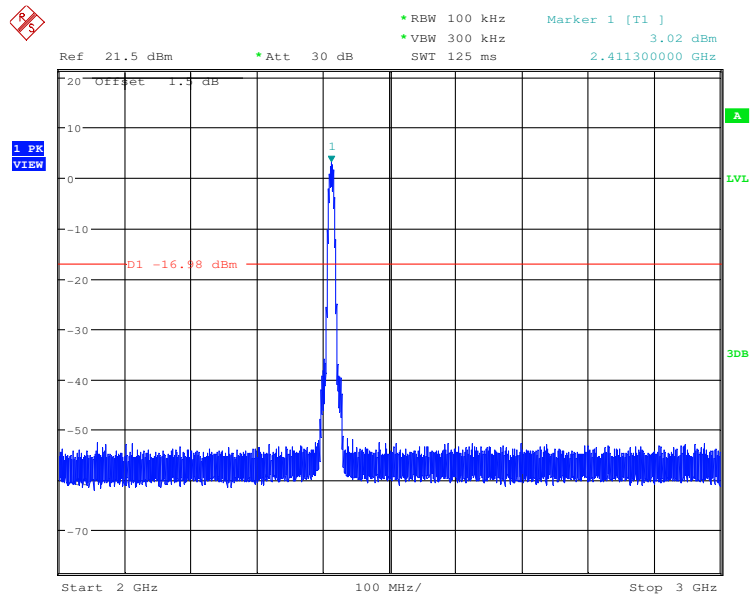
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Report No.: SZEM141100618201

Page: 51 of 114



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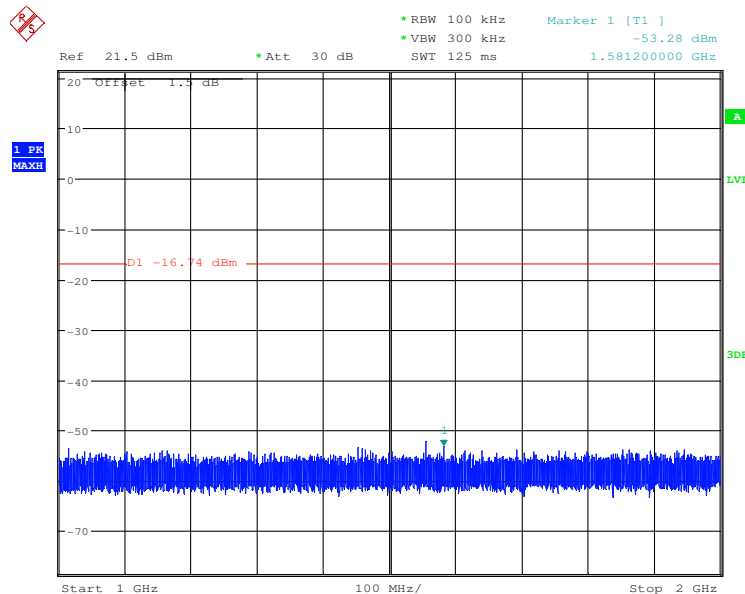
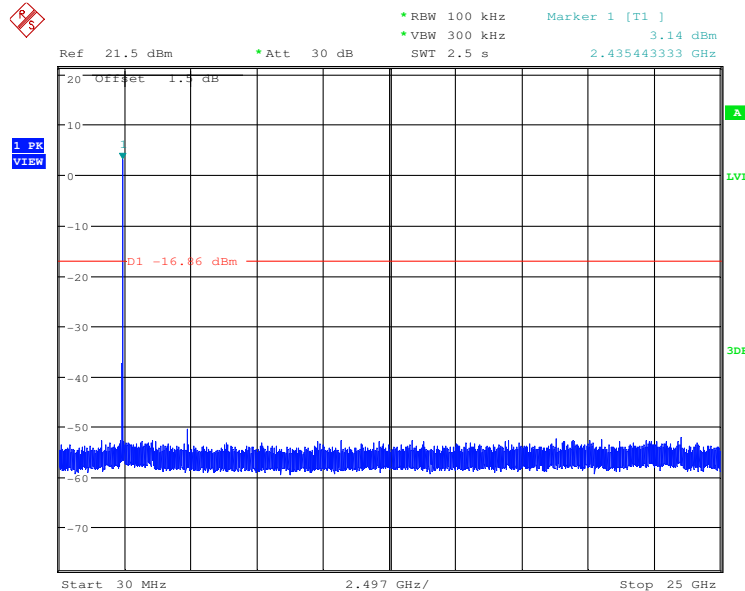


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Report No.: SZEM141100618201

Page: 52 of 114

Test mode:	802.11b	Test channel:	Middle
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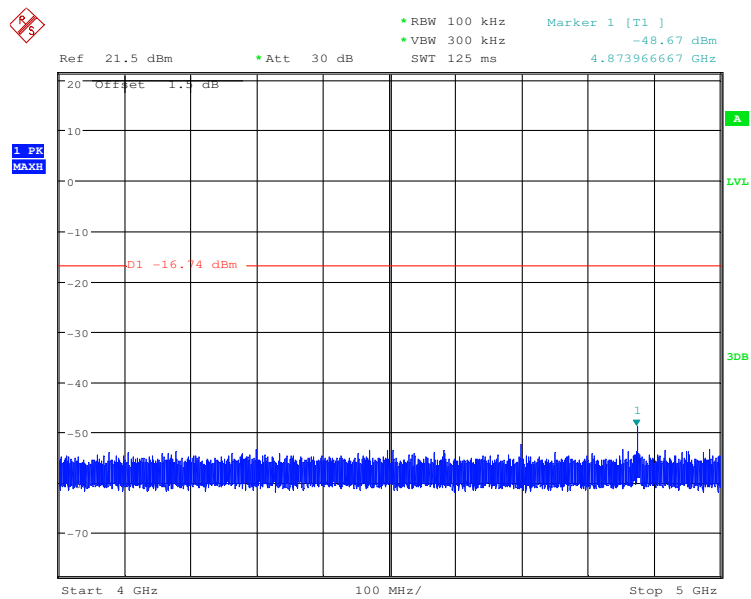
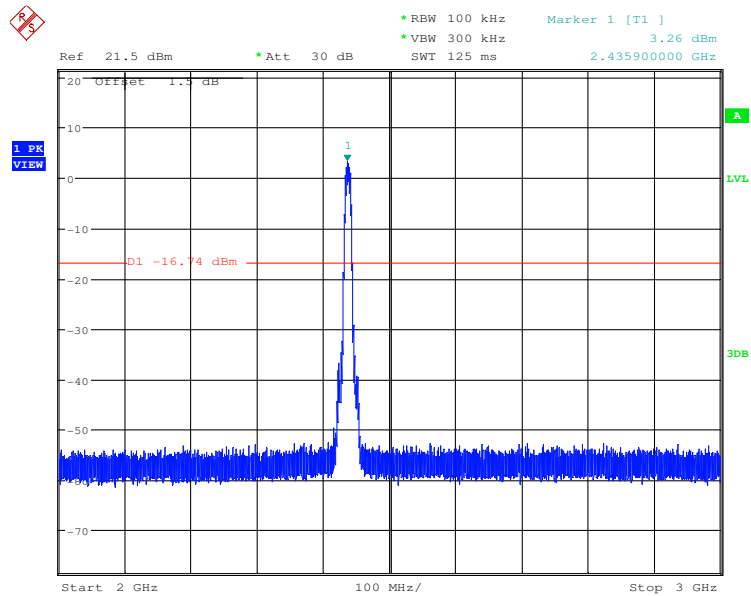
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Report No.: SZEM141100618201

Page: 53 of 114



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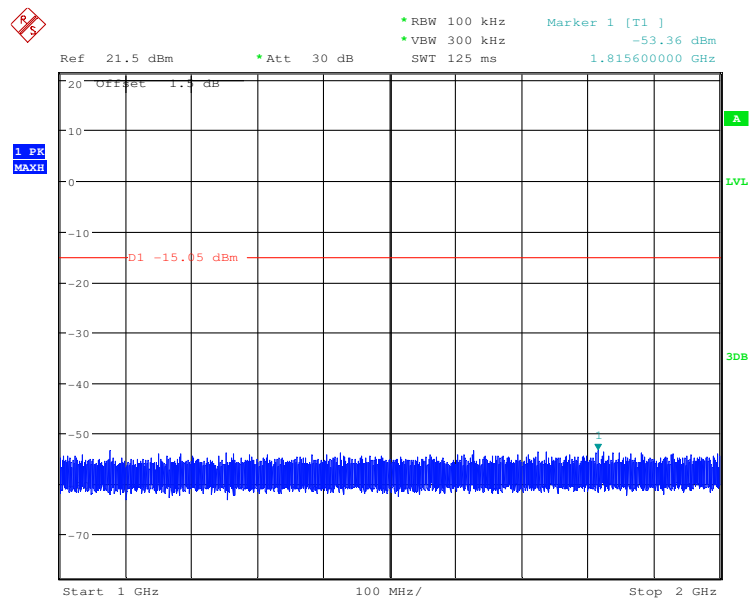
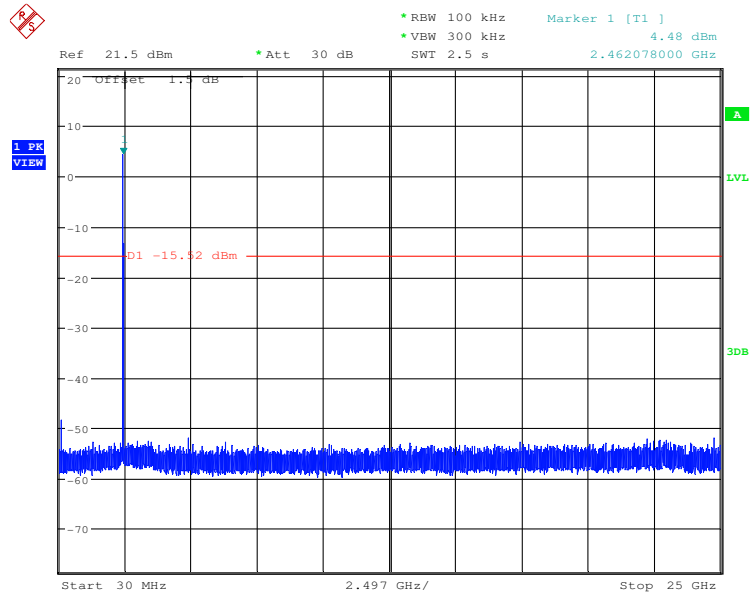


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Report No.: SZEM141100618201

Page: 54 of 114

Test mode:	802.11b	Test channel:	Highest
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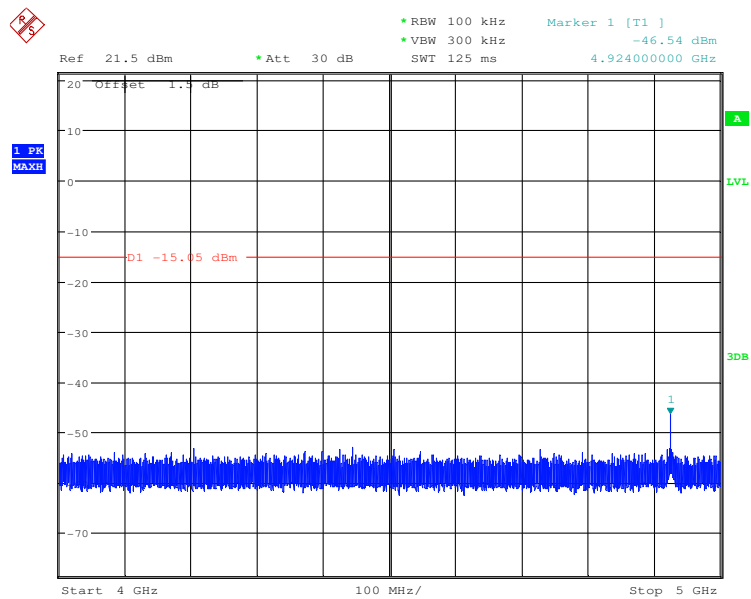
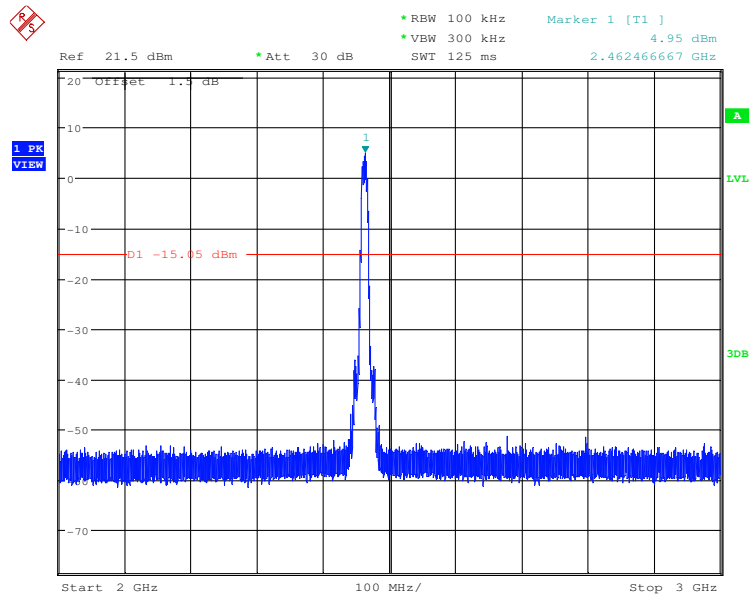
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Page: 55 of 114



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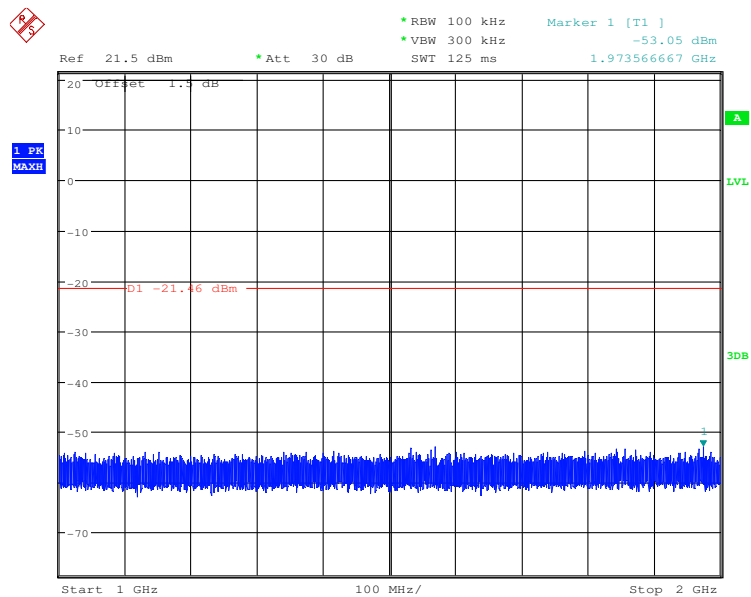
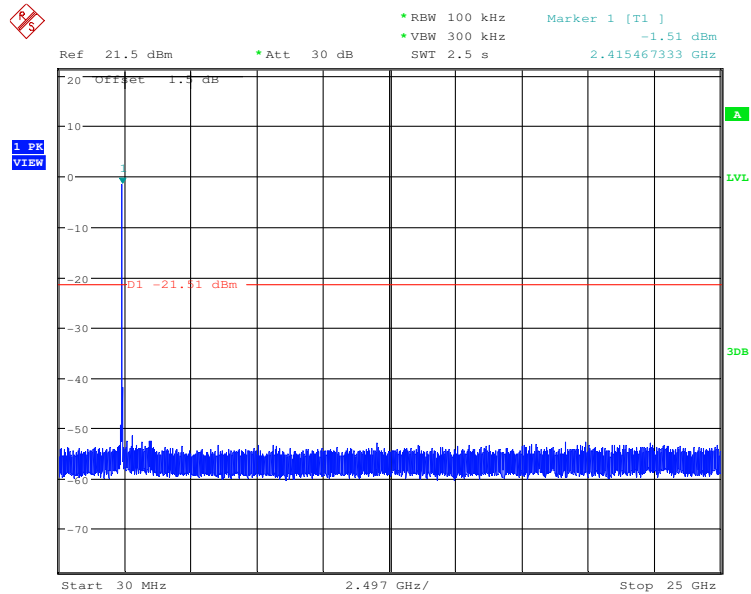


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Report No.: SZEM141100618201

Page: 56 of 114

Test mode:	802.11g	Test channel:	Lowest
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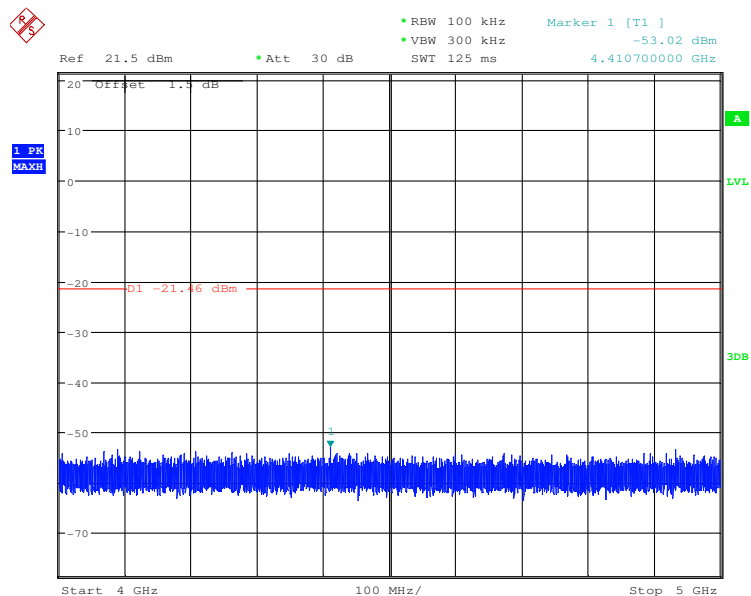
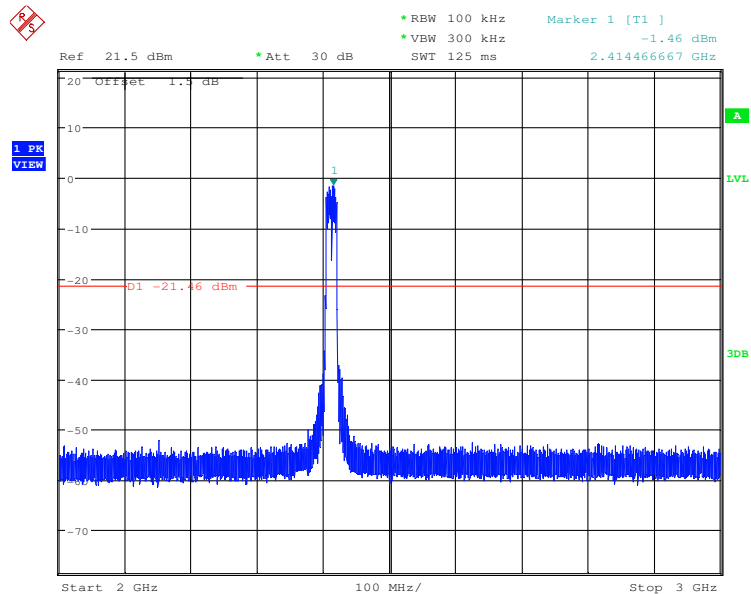
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Page: 57 of 114



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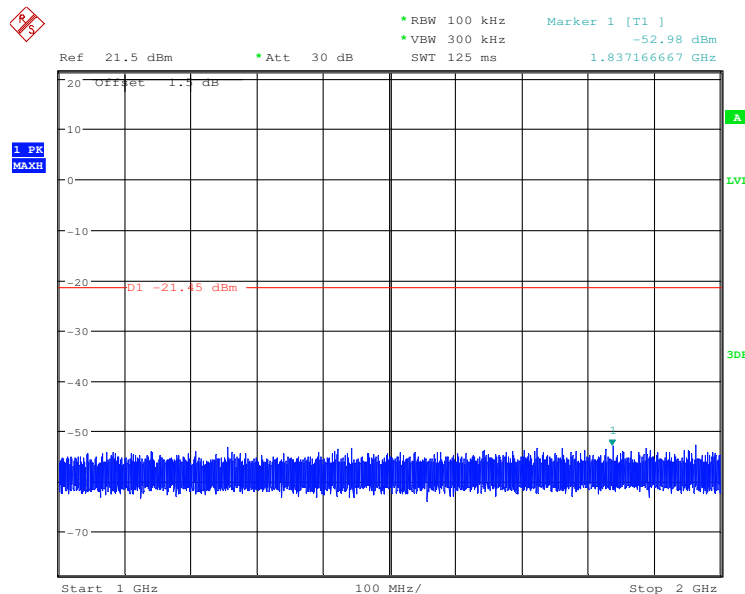
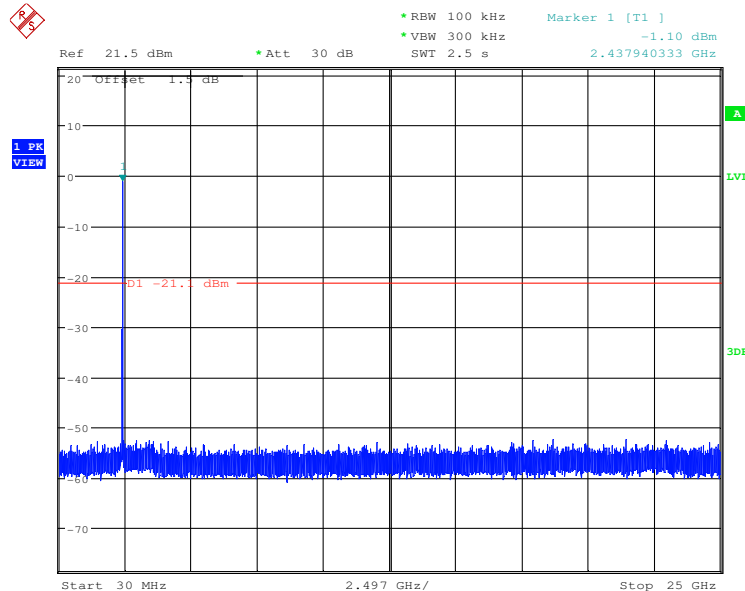


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Report No.: SZEM141100618201

Page: 58 of 114

Test mode:	802.11g	Test channel:	Middle
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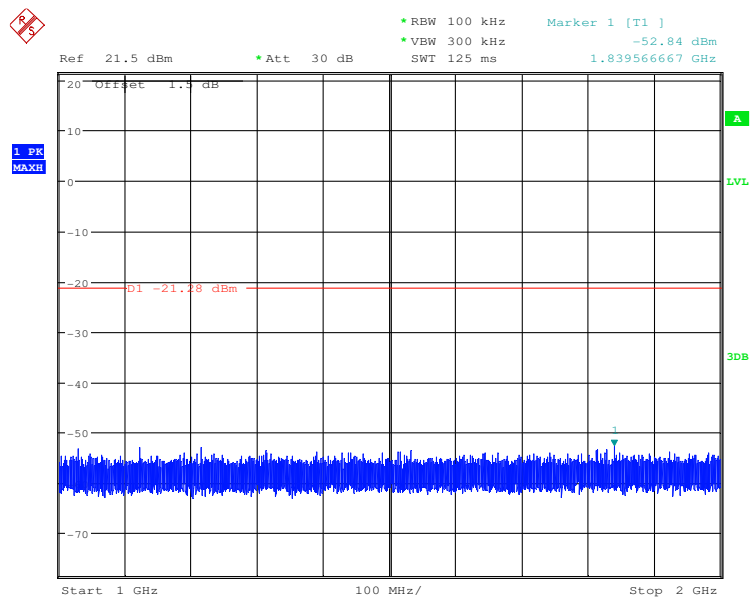
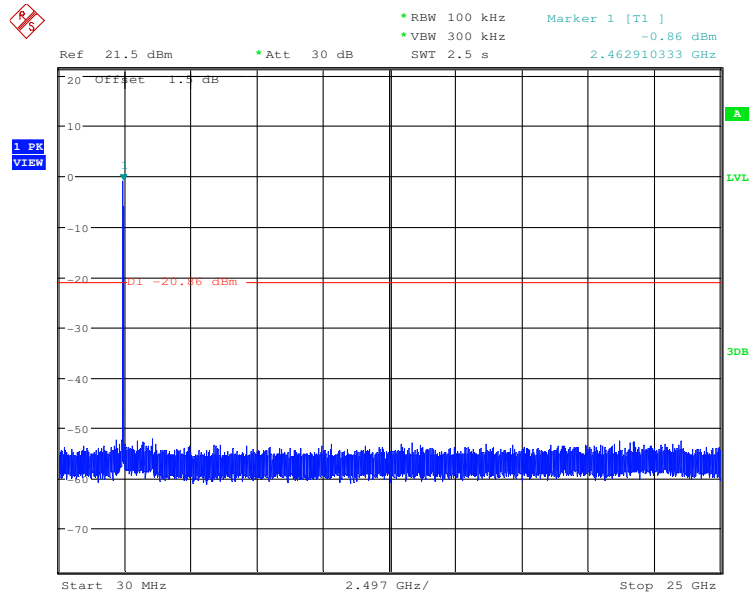


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Report No.: SZEM141100618201

Page: 60 of 114

Test mode:	802.11g	Test channel:	Highest
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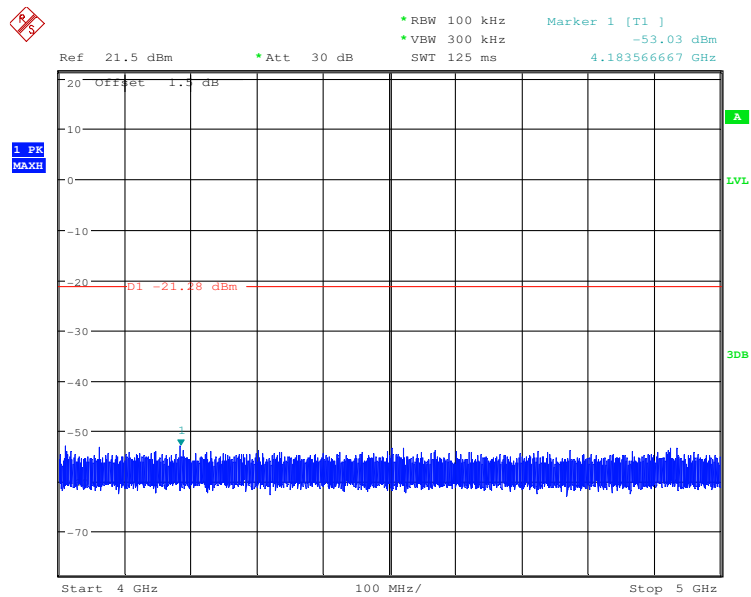
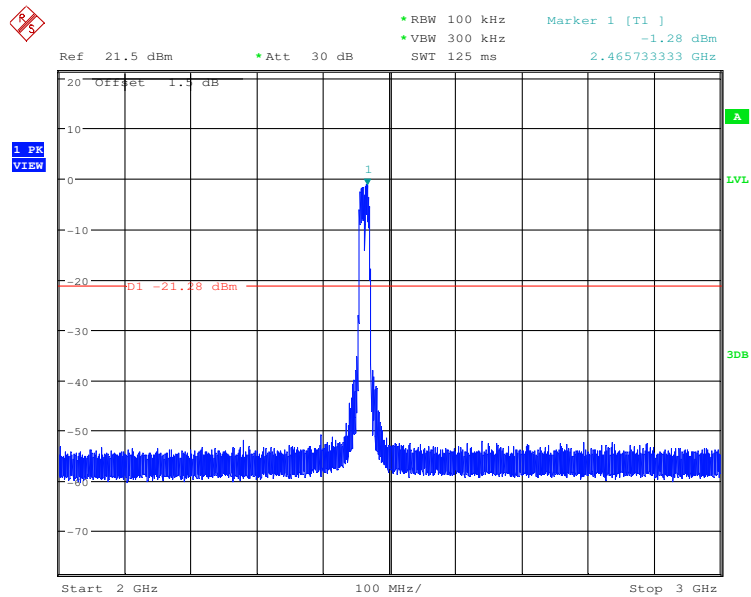
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Report No.: SZEM141100618201

Page: 61 of 114



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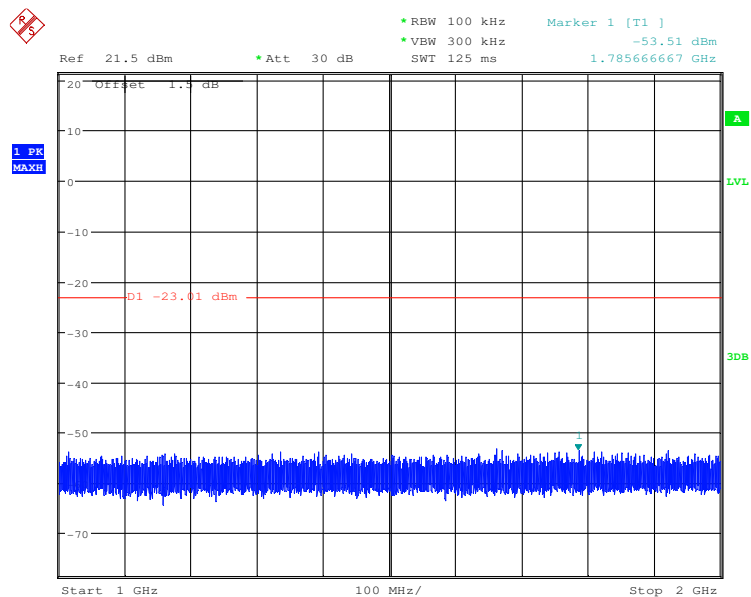
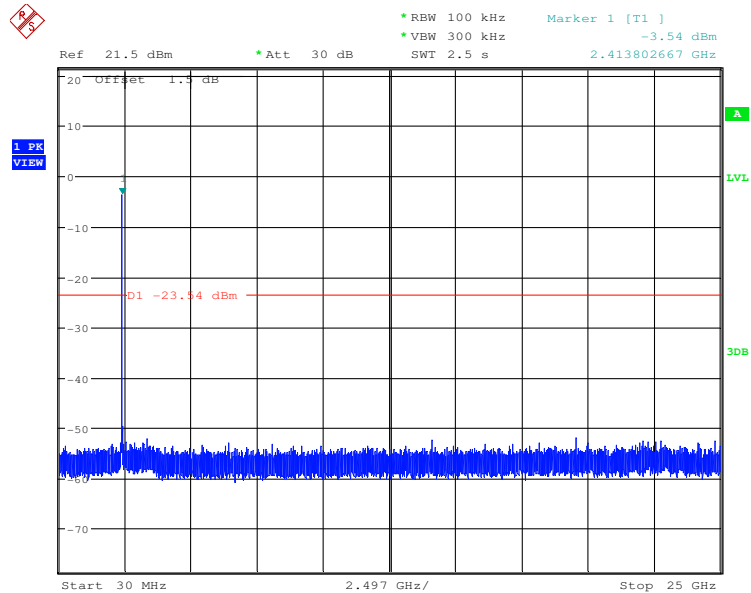


SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 62 of 114

Test mode:	802.11n (HT20)	Test channel:	Lowest
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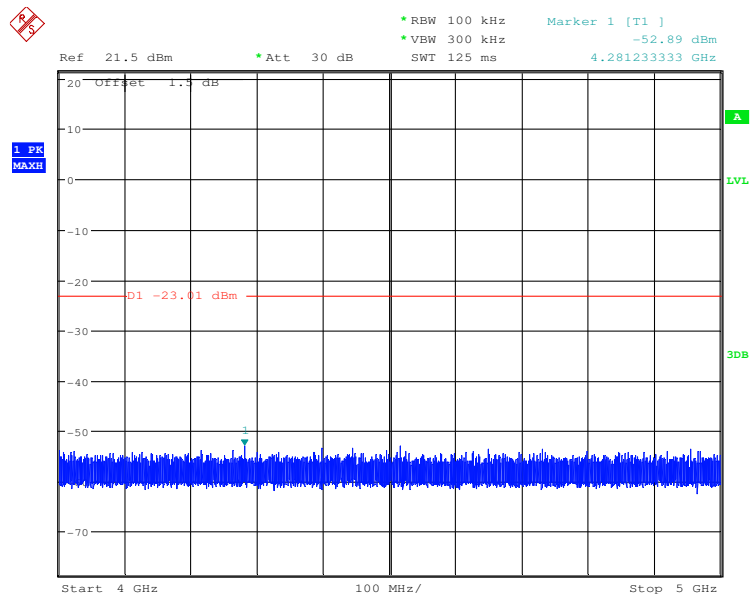
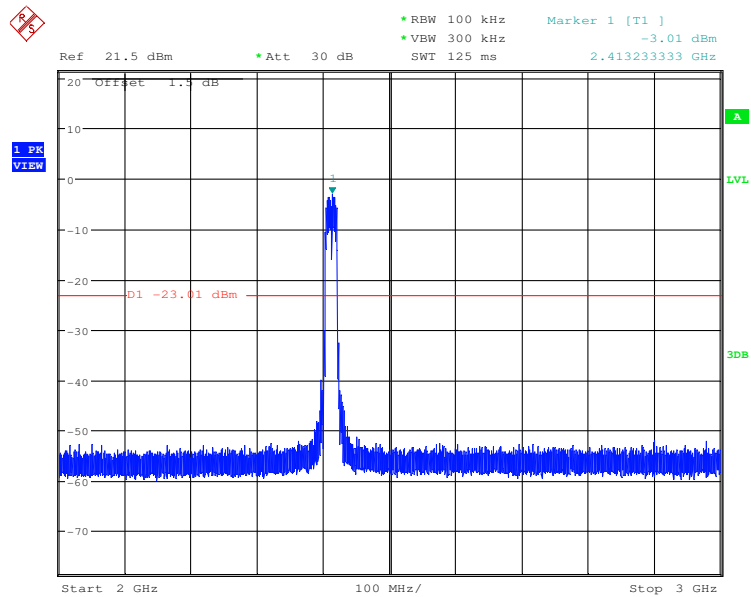
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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 63 of 114



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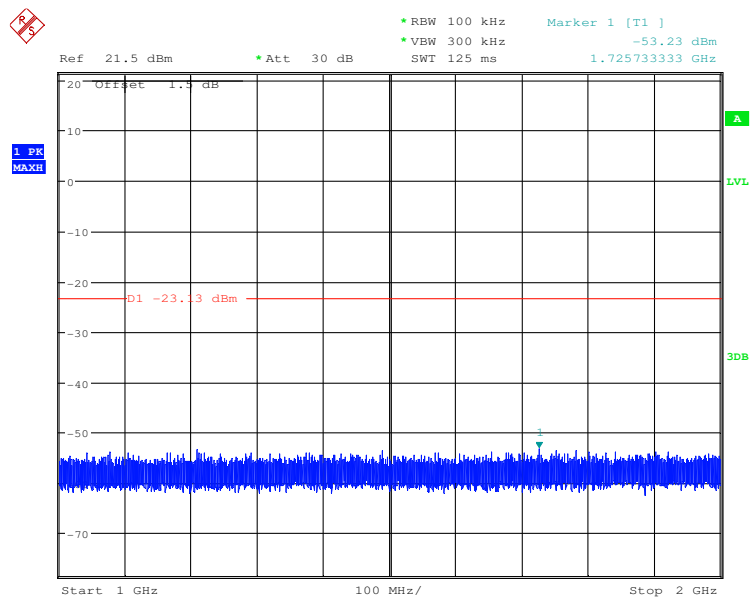
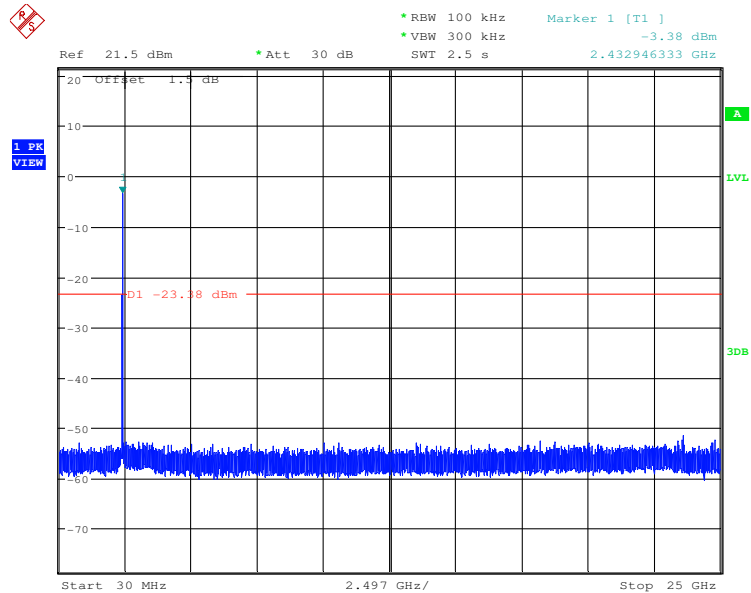


SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 64 of 114

Test mode:	802.11n (HT20)	Test channel:	Middle
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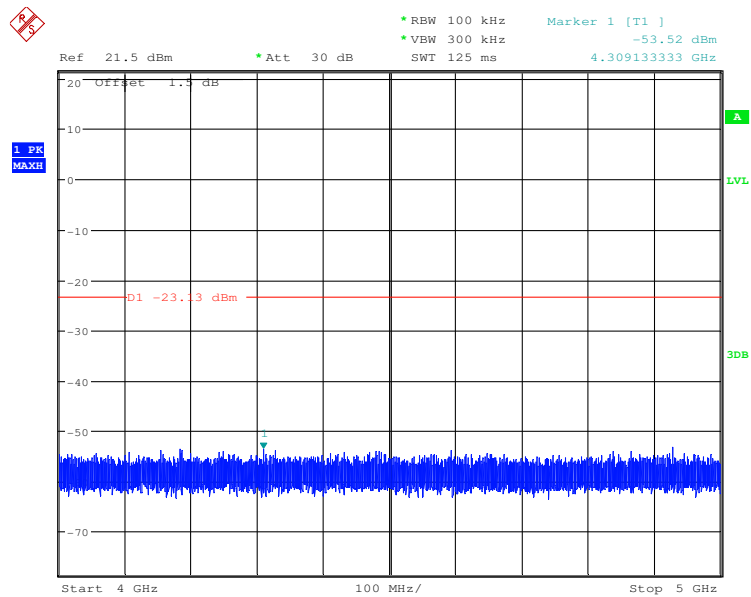
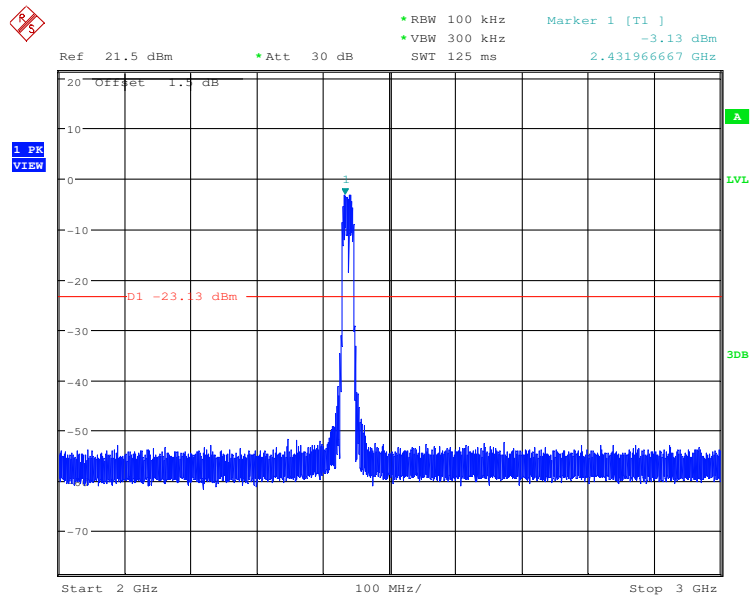
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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 65 of 114



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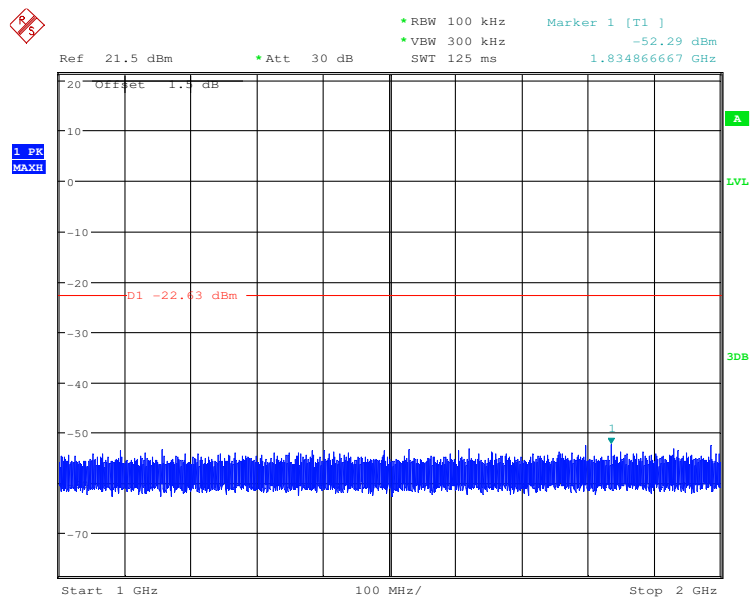
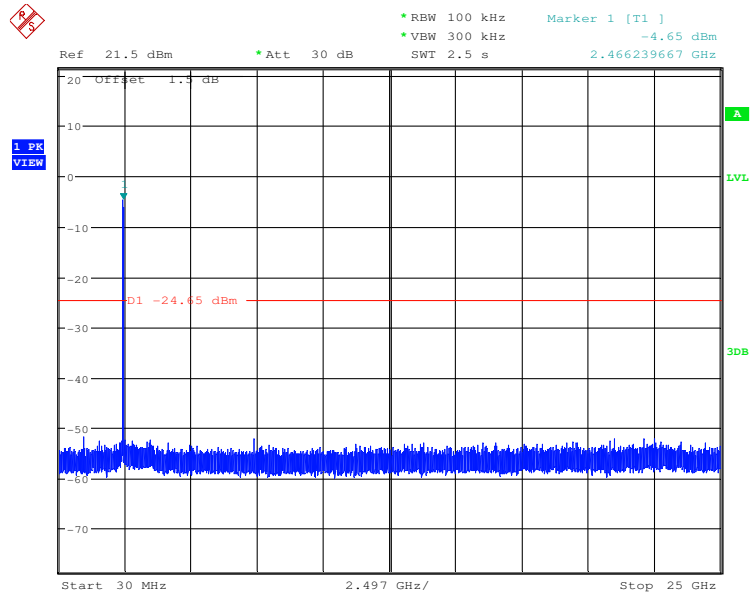


SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 66 of 114

Test mode:	802.11n (HT20)	Test channel:	Highest
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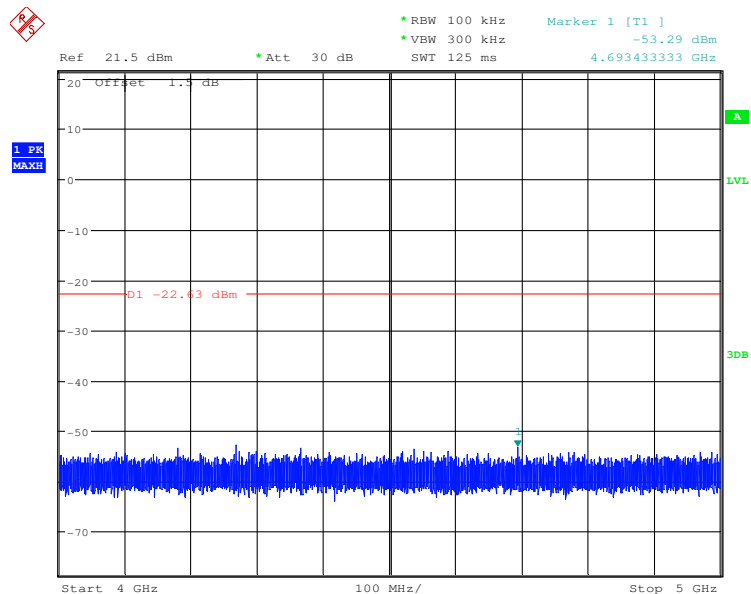
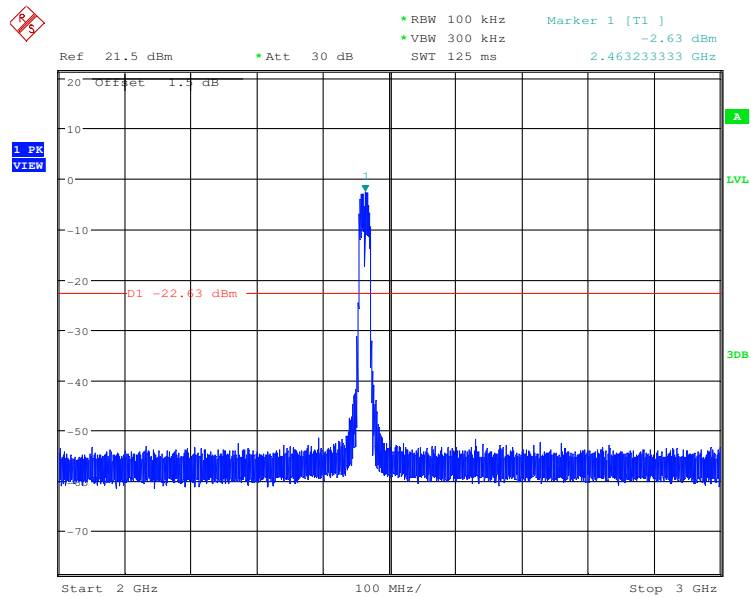
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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 67 of 114



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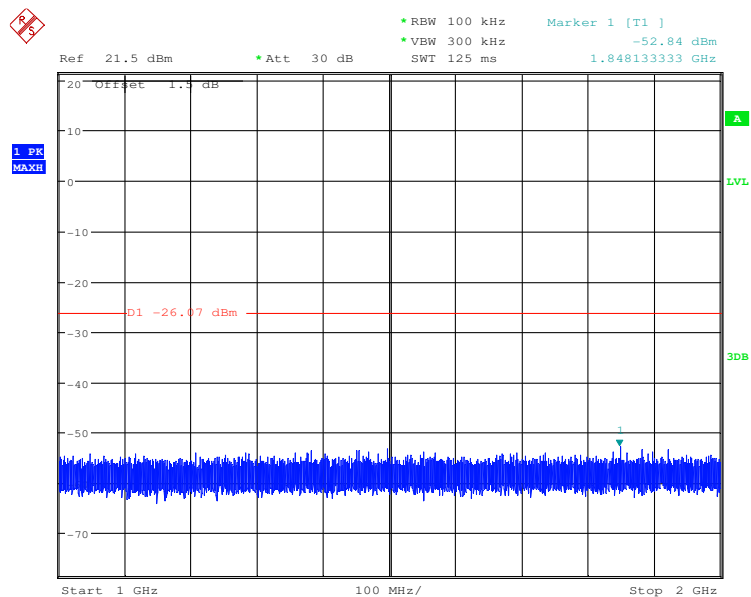
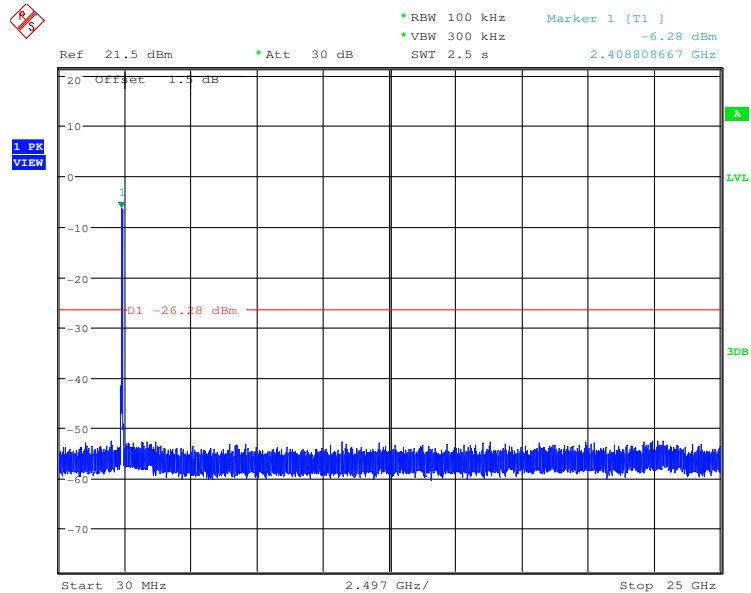


SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 68 of 114

Test mode:	802.11n (HT40)	Test channel:	Lowest
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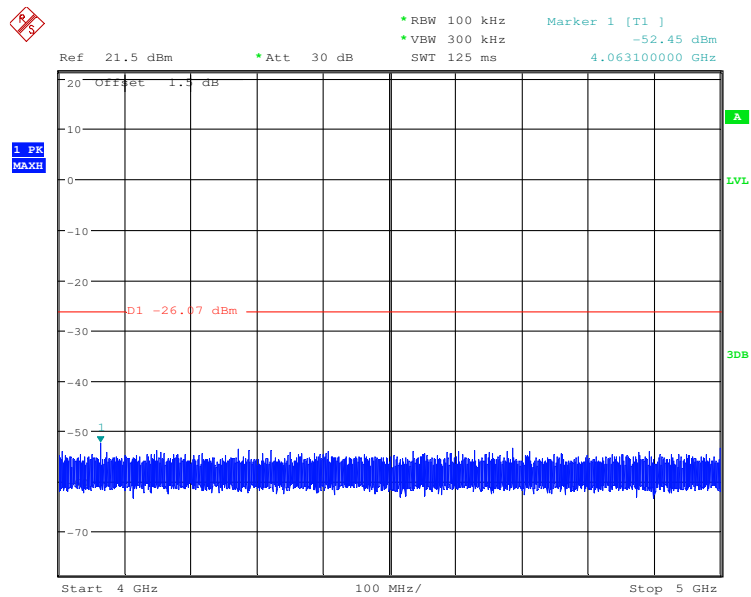
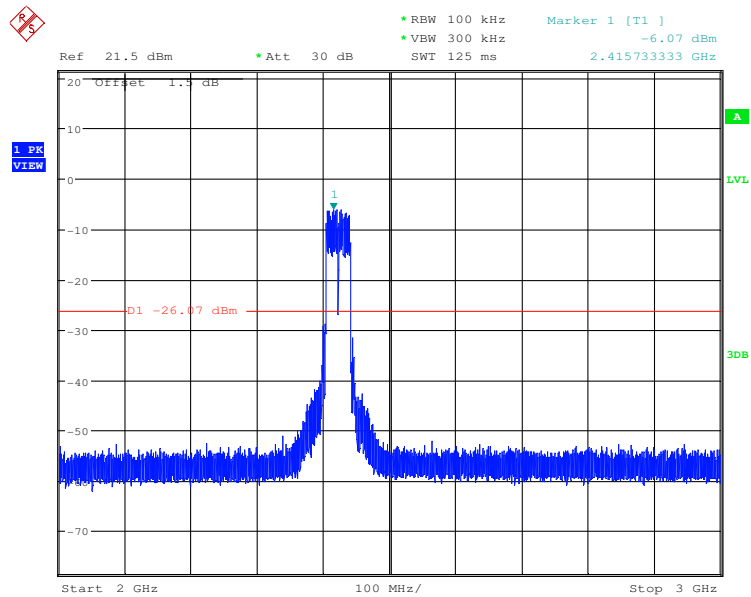
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Report No.: SZEM141100618201

Page: 69 of 114



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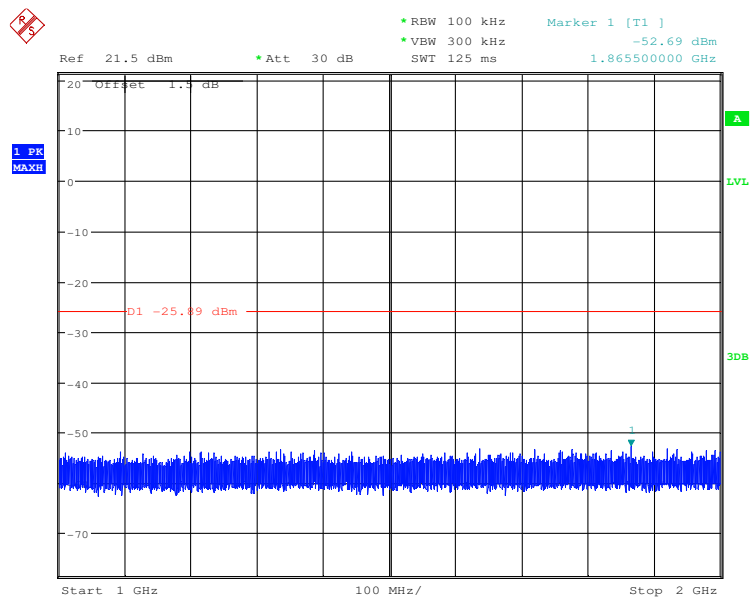
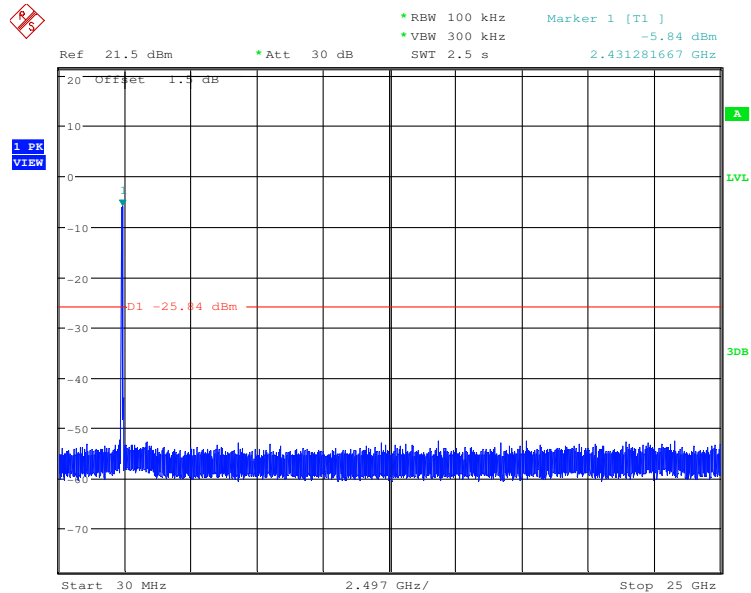


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Report No.: SZEM141100618201

Page: 70 of 114

Test mode:	802.11n (HT40)	Test channel:	Middle
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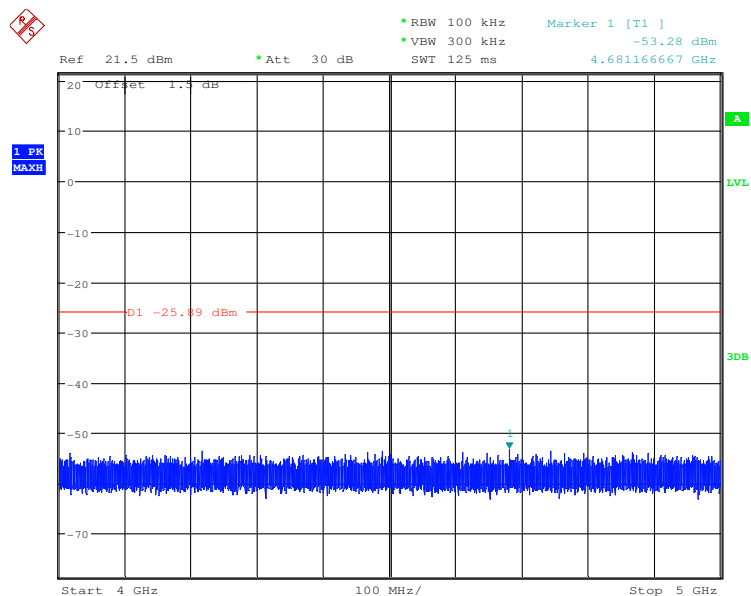
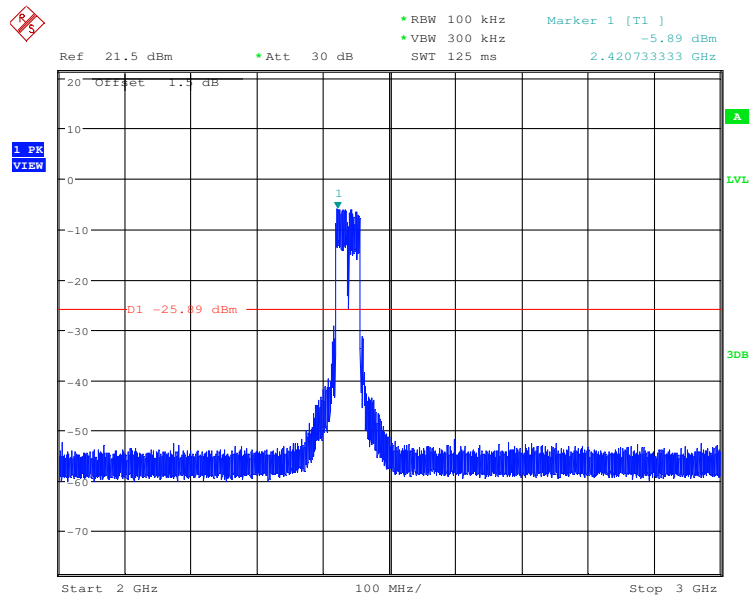
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Report No.: SZEM141100618201

Page: 71 of 114



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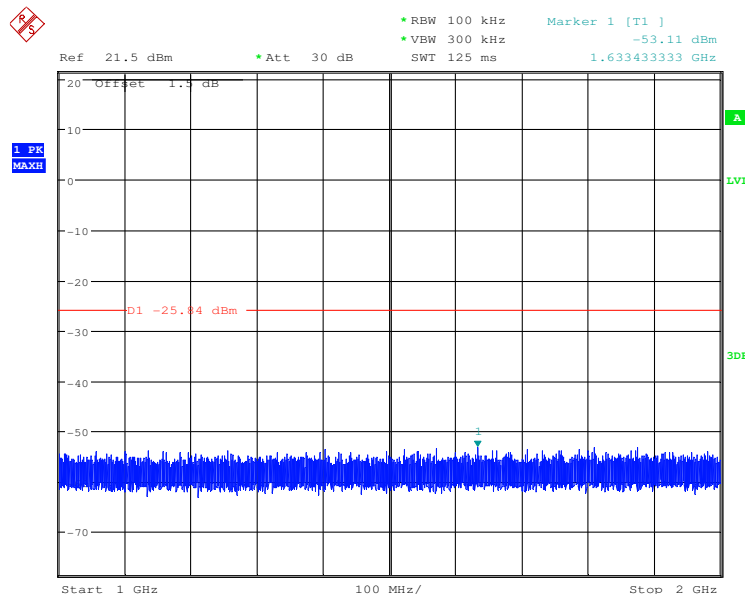
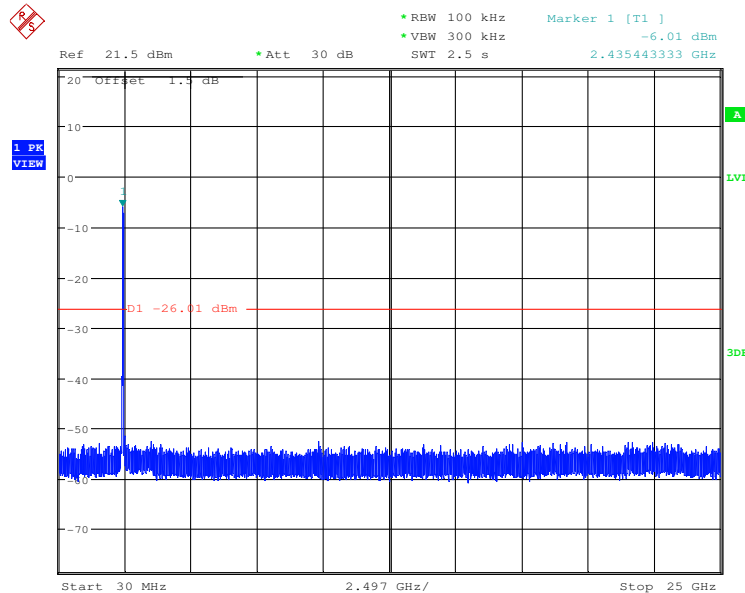


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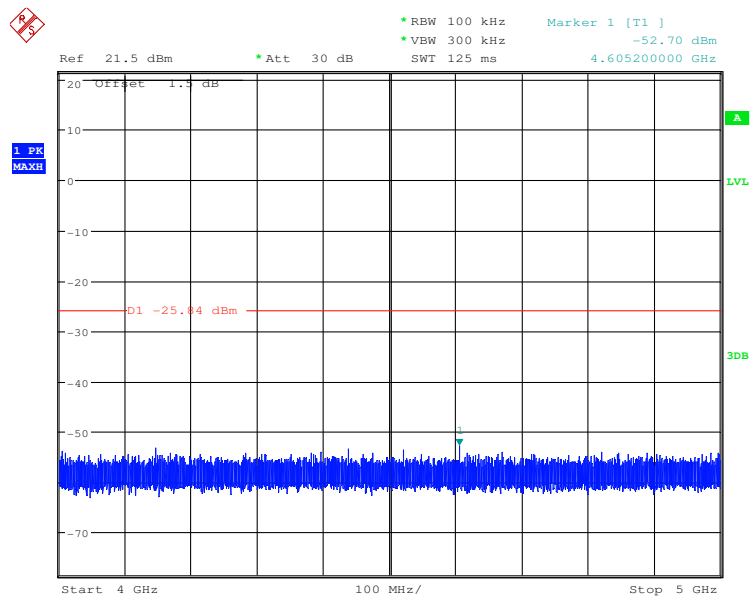
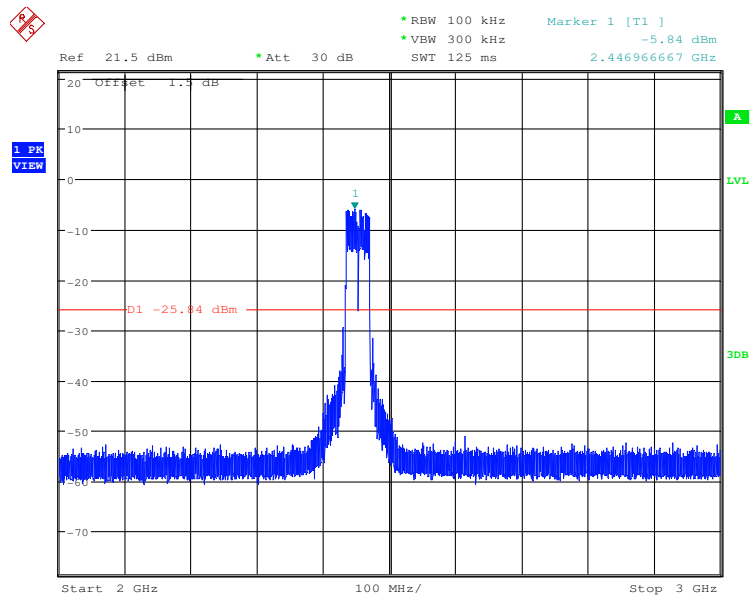
Report No.: SZEM141100618201

Page: 72 of 114

Test mode:	802.11n (HT40)	Test channel:	Highest
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Remark:

Pretest 9kHz to 25GHz, find the highest point when testing, so only the worst data were shown in the test report. Per FCC Part 15.33 (a) and 15.31 (o) ,The amplitude of spurious emissions from intentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this part.



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6.8 Radiated Spurious Emissions

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205				
Test Method:	ANSI C63.10 2009				
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	100 kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Limit:	Frequency	Field strength (microvolt/meter)	Limit (dBuV/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3
	Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.				

Test Setup:

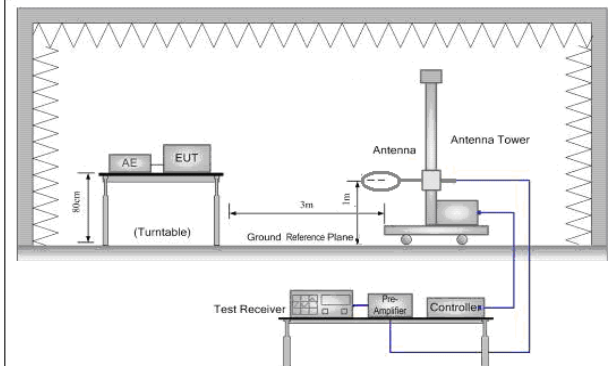


Figure 1. Below 30MHz

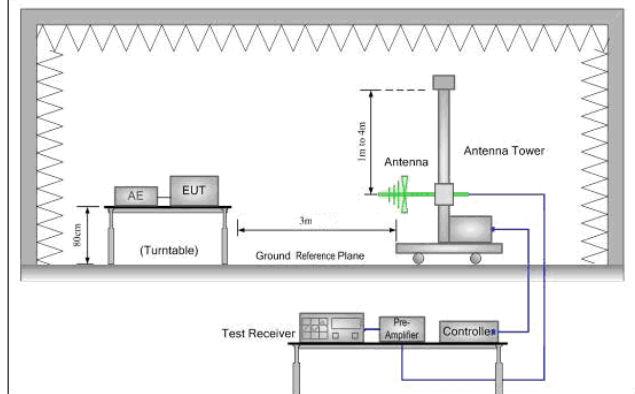


Figure 2. 30MHz to 1GHz

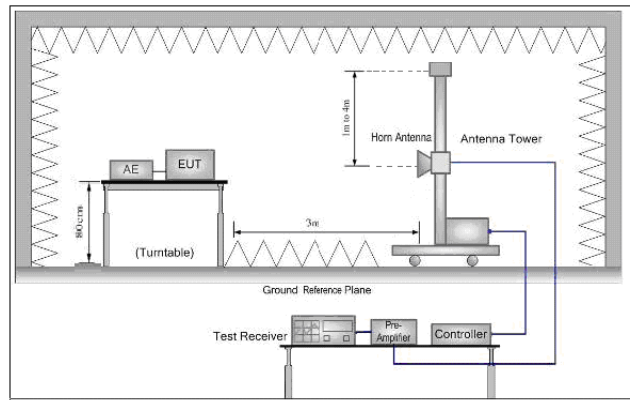


Figure 3. Above 1 GHz

Test Procedure:

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average



SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

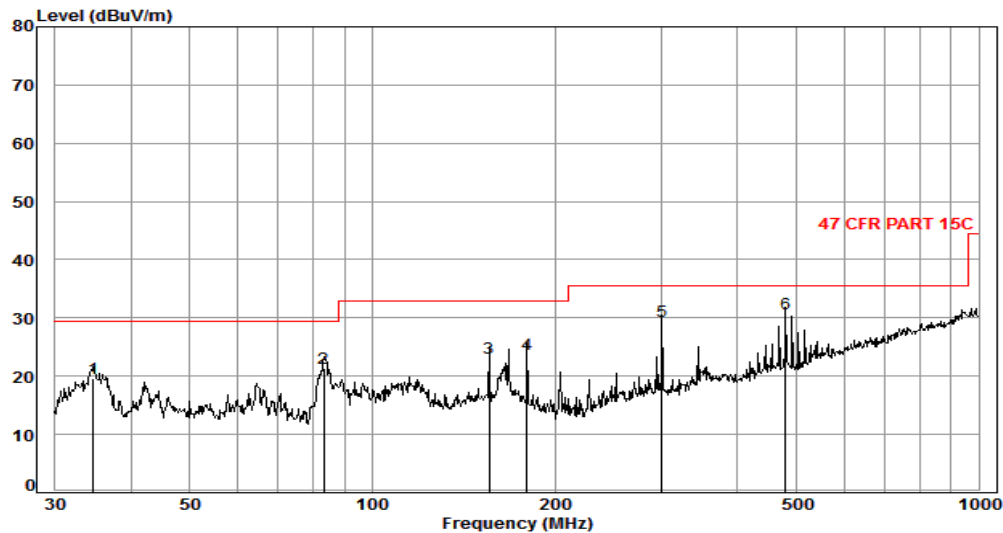
Page: 76 of 114

	method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel ,the middle channel ,the Highest channel h. Repeat above procedures until all frequencies measured was complete.
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates. Transmitting mode,
Final Test Mode:	Pretest the EUT at Transmitting mode Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g ; 6.5Mbps of rate is the worst case of 802.11n(HT20) ; 13.5Mbps of rate is the worst case of 802.11n(HT40) For below 1GHz, through Pre-scan, find the 1Mbps of rate of 802.11b at lowest channel is the worst case. Only the worst case is recorded in the report.
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass



6.8.1 Radiated emission below 1GHz

30MHz~1GHz (QP)		
Test mode:	Transmitting mode	Vertical



Condition: 47 CFR PART 15C 10m Vertical

Job No. : 6182CR

Test Mode: TX mode

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	34.64	6.70	11.66	32.66	33.91	19.61	29.50	-9.89
2	83.23	7.13	7.98	32.64	38.88	21.35	29.50	-8.15
3	155.91	7.48	13.16	32.61	35.05	23.08	33.00	-9.92
4	180.02	7.50	11.71	32.60	37.04	23.65	33.00	-9.35
5	300.37	8.05	13.08	32.55	40.83	29.41	35.60	-6.19
6 pp	480.53	8.50	17.16	32.58	37.69	30.77	35.60	-4.83

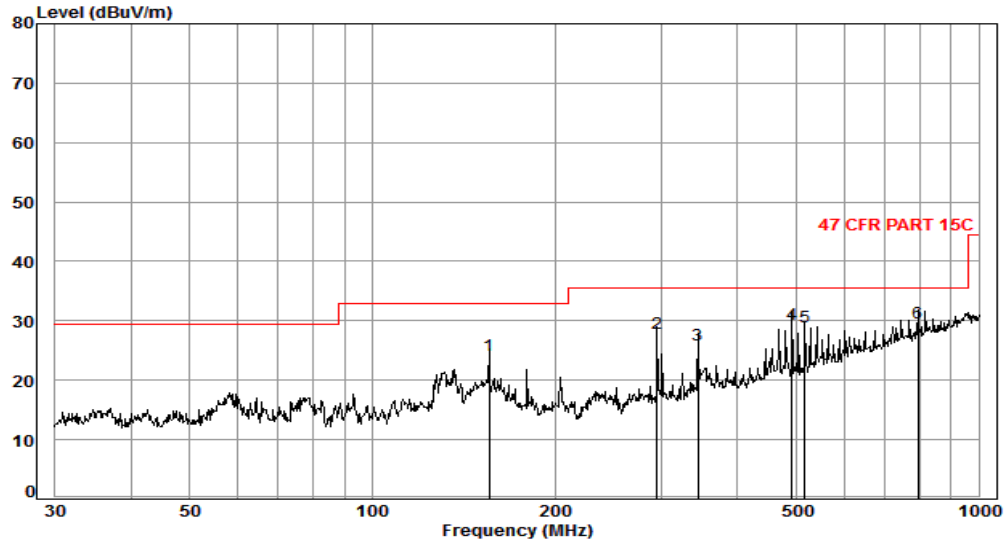


SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 78 of 114

Test mode:	Transmitting mode	Horizontal
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Condition: 47 CFR PART 15C 10m Horizontal

Job No. : 6182CR

Test Mode: TX mode

	Freq	Cable Loss	Ant Factor	Preamplifier Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	155.91	7.48	13.16	32.61	36.18	24.21	33.00	-8.79
2	295.15	8.04	12.97	32.55	39.47	27.93	35.60	-7.67
3	344.39	8.22	14.16	32.54	36.00	25.84	35.60	-9.76
4	492.47	8.56	17.27	32.59	36.27	29.51	35.60	-6.09
5	517.25	8.69	17.61	32.60	35.26	28.96	35.60	-6.64
6 pp	793.40	9.28	22.20	32.38	30.63	29.73	35.60	-5.87

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6.8.2 Transmitter emission above 1GHz

Test mode:		802.11b		Test channel:		Lowest		Remark:		Peak	
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
1511.463	6.50	26.00	34.70	47.80	45.60	74	-28.40	Vertical			
4824.000	7.60	34.40	35.10	46.20	53.10	74	-20.90	Vertical			
6658.840	9.10	35.40	33.70	45.30	56.10	74	-17.90	Vertical			
7236.000	9.90	35.80	33.80	47.10	59.00	74	-15.00	Vertical			
9648.000	12.10	37.20	32.40	44.00	60.90	74	-13.10	Vertical			
12444.382	15.00	38.00	32.10	40.60	61.50	74	-12.50	Vertical			
1326.234	6.00	24.70	34.20	49.10	45.60	74	-28.40	Horizontal			
4824.000	7.60	34.40	35.10	44.70	51.60	74	-22.40	Horizontal			
6517.195	8.90	35.30	33.70	44.50	55.00	74	-19.00	Horizontal			
7236.000	9.90	35.80	33.80	45.50	57.40	74	-16.60	Horizontal			
9648.000	12.10	37.20	32.40	44.20	61.10	74	-12.90	Horizontal			
11276.518	13.60	37.50	31.20	42.20	62.10	74	-11.90	Horizontal			

Test mode:		802.11b		Test channel:		Lowest		Remark:		Average	
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamplifier factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Polarization			
1511.463	6.50	26.00	34.70	31.50	29.30	54	-24.70	Vertical			
4824.000	7.60	34.40	35.10	31.80	38.70	54	-15.30	Vertical			
6658.840	9.10	35.40	33.70	32.50	43.30	54	-10.70	Vertical			
7236.000	9.90	35.80	33.80	32.80	44.70	54	-9.30	Vertical			
9648.000	12.10	37.20	32.40	31.30	48.20	54	-5.80	Vertical			
12444.382	15.00	38.00	32.10	28.40	49.30	54	-4.70	Vertical			
1326.234	6.00	24.70	34.20	29.90	26.40	54	-27.60	Horizontal			
4824.000	7.60	34.40	35.10	31.70	38.60	54	-15.40	Horizontal			
6517.195	8.90	35.30	33.70	32.60	43.10	54	-10.90	Horizontal			
7236.000	9.90	35.80	33.80	32.90	44.80	54	-9.20	Horizontal			
9648.000	12.10	37.20	32.40	31.20	48.10	54	-5.90	Horizontal			
11276.518	13.60	37.50	31.20	29.60	49.50	54	-4.50	Horizontal			



SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 80 of 114

Test mode:		802.11b		Test channel:		Middle		Remark:		Peak	
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
1329.151	6.00	24.80	34.20	56.20	52.80	74	-21.20	Vertical			
4874.000	7.60	34.50	35.20	45.40	52.30	74	-21.70	Vertical			
6682.745	9.10	35.40	33.70	44.70	55.50	74	-18.50	Vertical			
7311.000	10.00	35.70	33.80	45.60	57.50	74	-16.50	Vertical			
9748.000	12.30	37.30	32.10	43.60	61.10	74	-12.90	Vertical			
12267.276	15.00	37.90	31.90	40.30	61.30	74	-12.70	Vertical			
1327.692	6.00	24.70	34.20	48.50	45.00	74	-29.00	Horizontal			
4874.000	7.60	34.50	35.20	45.20	52.10	74	-21.90	Horizontal			
6517.195	8.90	35.30	33.70	45.10	55.60	74	-18.40	Horizontal			
7311.000	10.00	35.70	33.80	45.20	57.10	74	-16.90	Horizontal			
9748.000	12.30	37.30	32.10	44.00	61.50	74	-12.50	Horizontal			
11076.270	13.10	37.60	31.20	42.60	62.10	74	-11.90	Horizontal			

Test mode:		802.11b		Test channel:		Middle		Remark:		Average	
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamplifier factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Polarization			
1329.151	6.00	24.80	34.20	29.80	26.40	54	-27.60	Vertical			
4874.000	7.60	34.50	35.20	31.70	38.60	54	-15.40	Vertical			
6882.745	9.40	35.40	33.90	32.10	43.00	54	-11.00	Vertical			
7311.000	10.00	35.70	33.80	33.00	44.90	54	-9.10	Vertical			
9748.000	12.30	37.30	32.10	31.10	48.60	54	-5.40	Vertical			
12267.276	15.00	37.90	31.90	28.70	49.70	54	-4.30	Vertical			
1327.692	6.00	24.70	34.20	29.90	26.40	54	-27.60	Horizontal			
4874.000	7.60	34.50	35.20	31.70	38.60	54	-15.40	Horizontal			
6517.195	8.90	35.30	33.70	32.40	42.90	54	-11.10	Horizontal			
7311.000	10.00	35.70	33.80	32.90	44.80	54	-9.20	Horizontal			
9748.000	12.30	37.30	32.10	30.80	48.30	54	-5.70	Horizontal			
11076.270	13.10	37.60	31.20	30.30	49.80	54	-4.20	Horizontal			

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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 81 of 114

Test mode:		802.11b		Test channel:		Highest		Remark:		Peak
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
1331.972	6.00	24.80	34.20	59.90	56.50	74	-17.50	Vertical		
4924.000	7.60	34.60	35.20	44.90	51.90	74	-22.10	Vertical		
6635.020	9.10	35.40	33.70	45.70	56.50	74	-17.50	Vertical		
7386.000	10.00	35.70	33.90	45.80	57.60	74	-16.40	Vertical		
9848.000	12.30	37.30	32.10	44.20	61.70	74	-12.30	Vertical		
12489.057	15.00	38.00	32.20	42.00	62.80	74	-11.20	Vertical		
1545.041	6.70	26.30	34.70	49.50	47.80	74	-26.20	Horizontal		
4924.000	7.60	34.60	35.20	45.60	52.60	74	-21.40	Horizontal		
6587.637	9.00	35.40	33.70	45.00	55.70	74	-18.30	Horizontal		
7386.000	10.00	35.70	33.90	45.70	57.50	74	-16.50	Horizontal		
9848.000	12.30	37.30	32.10	44.30	61.80	74	-12.20	Horizontal		
12289.310	15.00	37.90	31.90	40.50	61.50	74	-12.50	Horizontal		

Test mode:		802.11b		Test channel:		Highest		Remark:		Average	
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamplifier factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Polarization			
1331.972	6.00	24.80	34.20	30.00	26.60	54	-27.40	Vertical			
4924.000	7.60	34.60	35.20	31.20	38.20	54	-15.80	Vertical			
6635.020	9.10	35.40	33.70	32.30	43.10	54	-10.90	Vertical			
7386.000	10.00	35.70	33.90	33.10	44.90	54	-9.10	Vertical			
9848.000	12.30	37.30	32.10	30.30	47.80	54	-6.20	Vertical			
12489.057	15.00	38.00	32.20	28.60	49.40	54	-4.60	Vertical			
1545.041	6.70	26.30	34.70	29.60	27.90	54	-26.10	Horizontal			
4924.000	7.60	34.60	35.20	31.40	38.40	54	-15.60	Horizontal			
6587.637	9.00	35.40	33.70	32.50	43.20	54	-10.80	Horizontal			
7386.000	10.00	35.70	33.90	32.70	44.50	54	-9.50	Horizontal			
9848.000	12.30	37.30	32.10	31.20	48.70	54	-5.30	Horizontal			
12289.310	15.00	37.90	31.90	28.80	49.80	54	-4.20	Horizontal			

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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 82 of 114

Test mode:		802.11g		Test channel:		Lowest		Remark:		Peak	
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
1326.234	6.00	24.70	34.20	59.60	56.10	74	-17.90	Vertical			
4824.000	7.60	34.40	35.10	44.80	51.70	74	-22.30	Vertical			
6599.451	9.00	35.40	33.70	46.10	56.80	74	-17.20	Vertical			
7236.000	9.90	35.80	33.80	45.50	57.40	74	-16.60	Vertical			
9648.000	12.10	37.20	32.40	44.00	60.90	74	-13.10	Vertical			
11984.838	14.10	37.70	31.80	41.80	61.80	74	-12.20	Vertical			
1329.151	6.00	24.80	34.20	51.50	48.10	74	-25.90	Horizontal			
4824.000	7.60	34.40	35.10	45.30	52.20	74	-21.80	Horizontal			
6599.451	9.00	35.40	33.70	45.20	55.90	74	-18.10	Horizontal			
7236.000	9.90	35.80	33.80	45.30	57.20	74	-16.80	Horizontal			
9648.000	12.10	37.20	32.40	44.30	61.20	74	-12.80	Horizontal			
11625.285	13.40	37.70	31.70	42.50	61.90	74	-12.10	Horizontal			

Test mode:		802.11g		Test channel:		Lowest		Remark:		Average	
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Polarization			
1326.234	6.00	24.70	34.20	29.70	26.20	54	-27.80	Vertical			
4824.000	7.60	34.40	35.10	31.90	38.80	54	-15.20	Vertical			
6599.451	9.00	35.40	33.70	32.50	43.20	54	-10.80	Vertical			
7236.000	9.90	35.80	33.80	32.90	44.80	54	-9.20	Vertical			
9648.000	12.10	37.20	32.40	30.90	47.80	54	-6.20	Vertical			
11984.838	14.10	37.70	31.80	29.50	49.50	54	-4.50	Vertical			
1329.151	6.00	24.80	34.20	29.70	26.30	54	-27.70	Horizontal			
4824.000	7.60	34.40	35.10	31.80	38.70	54	-15.30	Horizontal			
6599.451	9.00	35.40	33.70	32.60	43.30	54	-10.70	Horizontal			
7236.000	9.90	35.80	33.80	33.20	45.10	54	-8.90	Horizontal			
9648.000	12.10	37.20	32.40	31.00	47.90	54	-6.10	Horizontal			
11625.285	13.40	37.70	31.70	29.40	48.80	54	-5.20	Horizontal			

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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 83 of 114

Test mode:		802.11g		Test channel:		Middle		Remark:		Peak	
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
1329.151	6.00	24.70	34.20	55.10	51.60	74	-22.40	Vertical			
4874.000	7.60	34.50	35.10	44.90	51.90	74	-22.10	Vertical			
6785.426	9.20	35.30	33.70	44.60	55.40	74	-18.60	Vertical			
7311.000	10.00	35.70	33.80	45.00	56.90	74	-17.10	Vertical			
9748.000	12.30	37.30	32.10	43.30	60.80	74	-13.20	Vertical			
11267.546	13.60	37.50	31.10	41.10	61.10	74	-12.90	Vertical			
1328.589	6.00	24.70	34.20	48.70	45.20	74	-28.80	Horizontal			
4874.000	7.60	34.50	35.10	45.20	52.20	74	-21.80	Horizontal			
6652.136	9.10	35.40	33.70	44.10	54.90	74	-19.10	Horizontal			
7311.000	10.00	35.70	33.80	45.70	57.60	74	-16.40	Horizontal			
9748.000	12.30	37.30	32.10	43.00	60.50	74	-13.50	Horizontal			
12245.218	14.90	37.90	31.90	41.20	62.10	74	-11.90	Horizontal			

Test mode:		802.11g		Test channel:		Middle		Remark:		Average	
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Polarization			
1329.151	6.00	24.70	34.20	30.00	26.50	54	-27.50	Vertical			
4874.000	7.60	34.50	35.10	31.40	38.40	54	-15.60	Vertical			
6785.426	9.20	35.30	33.70	32.00	42.80	54	-11.20	Vertical			
7311.000	10.00	35.70	33.80	32.80	44.70	54	-9.30	Vertical			
9748.000	12.30	37.30	32.10	31.00	48.50	54	-5.50	Vertical			
11267.546	13.60	37.50	31.10	29.20	49.20	54	-4.80	Vertical			
1328.589	6.00	24.70	34.20	30.30	26.80	54	-27.20	Horizontal			
4874.000	7.60	34.50	35.10	31.40	38.40	54	-15.60	Horizontal			
6652.136	9.10	35.40	33.70	31.70	42.50	54	-11.50	Horizontal			
7311.000	10.00	35.70	33.80	33.30	45.20	54	-8.80	Horizontal			
9748.000	12.30	37.30	32.10	30.40	47.90	54	-6.10	Horizontal			
12245.218	14.90	37.90	31.90	29.30	50.20	54	-3.80	Horizontal			



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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 84 of 114

Test mode:		802.11g		Test channel:		Highest		Remark:		Peak	
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
1327.692	6.00	24.70	34.20	54.50	51.00	74	-23.00	Vertical			
4924.000	7.60	34.60	35.20	45.30	52.30	74	-21.70	Vertical			
6517.195	8.90	35.30	33.70	44.90	55.40	74	-18.60	Vertical			
7386.000	10.00	35.70	33.90	46.40	58.20	74	-15.80	Vertical			
9848.000	12.30	37.30	32.10	44.60	62.10	74	-11.90	Vertical			
11236.181	13.50	37.50	31.10	41.90	61.80	74	-12.20	Vertical			
1609.139	7.30	26.40	34.80	47.40	46.30	74	-27.70	Horizontal			
4924.000	7.60	34.60	35.20	45.30	52.30	74	-21.70	Horizontal			
6505.529	8.90	35.20	33.70	45.30	55.70	74	-18.30	Horizontal			
7386.000	10.00	35.70	33.90	45.80	57.60	74	-16.40	Horizontal			
9848.000	12.30	37.30	32.10	43.90	61.40	74	-12.60	Horizontal			
11418.843	13.50	37.60	31.50	42.50	62.10	74	-11.90	Horizontal			

Test mode:		802.11g		Test channel:		Highest		Remark:		Average	
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Polarization			
1327.692	6.00	24.70	34.20	29.90	26.40	54	-27.60	Vertical			
4924.000	7.60	34.60	35.20	31.90	38.90	54	-15.10	Vertical			
6517.195	8.90	35.30	33.70	32.50	43.00	54	-11.00	Vertical			
7386.000	10.00	35.70	33.90	32.70	44.50	54	-9.50	Vertical			
9848.000	12.30	37.30	32.10	31.00	48.50	54	-5.50	Vertical			
11236.181	13.50	37.50	31.10	29.70	49.60	54	-4.40	Vertical			
1608.139	7.20	26.40	34.80	30.30	29.10	54	-24.90	Horizontal			
4924.000	7.60	34.60	35.20	31.30	38.30	54	-15.70	Horizontal			
6505.529	8.90	35.20	33.70	32.70	43.10	54	-10.90	Horizontal			
7386.000	10.00	35.70	33.90	33.20	45.00	54	-9.00	Horizontal			
9848.000	12.30	37.30	32.10	30.50	48.00	54	-6.00	Horizontal			
11418.843	13.50	37.60	31.50	29.80	49.40	54	-4.60	Horizontal			

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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 85 of 114

Test mode:		802.11n(HT20)		Test channel:		Lowest		Remark:		Peak	
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
1327.692	6.00	24.70	34.20	57.50	54.00	74	-20.00	Vertical			
4824.000	7.60	34.40	35.10	45.70	52.60	74	-21.40	Vertical			
6730.812	9.20	35.30	33.70	46.30	57.10	74	-16.90	Vertical			
7236.000	9.90	35.80	33.80	45.90	57.80	74	-16.20	Vertical			
9648.000	12.10	37.20	32.40	44.50	61.40	74	-12.60	Vertical			
11276.518	13.60	37.50	31.20	41.10	61.00	74	-13.00	Vertical			
1333.539	6.00	24.80	34.20	48.10	44.70	74	-29.30	Horizontal			
4824.000	7.60	34.40	35.10	45.70	52.60	74	-21.40	Horizontal			
6505.529	8.90	35.20	33.70	46.00	56.40	74	-17.60	Horizontal			
7236.000	9.90	35.80	33.80	45.90	57.80	74	-16.20	Horizontal			
9648.000	12.10	37.20	32.40	43.30	60.20	74	-13.80	Horizontal			
12245.316	14.90	37.90	31.90	40.60	61.50	74	-12.50	Horizontal			

Test mode:		802.11n(HT20)		Test channel:		Lowest		Remark:		Average	
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamplifier factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Polarization			
1327.692	6.00	24.70	34.20	30.10	26.60	54	-27.40	Vertical			
4824.000	7.60	34.40	35.10	32.20	39.10	54	-14.90	Vertical			
6730.812	9.20	35.30	33.70	32.60	43.40	54	-10.60	Vertical			
7236.000	9.90	35.80	33.80	32.00	43.90	54	-10.10	Vertical			
9648.000	12.10	37.20	32.40	31.70	48.60	54	-5.40	Vertical			
11276.518	13.60	37.50	31.20	29.40	49.30	54	-4.70	Vertical			
1333.539	6.00	24.80	34.20	30.30	26.90	54	-27.10	Horizontal			
4824.000	7.60	34.40	35.10	31.80	38.70	54	-15.30	Horizontal			
6505.529	8.90	35.20	33.70	33.10	43.50	54	-10.50	Horizontal			
7236.000	9.90	35.80	33.80	32.80	44.70	54	-9.30	Horizontal			
9648.000	12.10	37.20	32.40	31.20	48.10	54	-5.90	Horizontal			
12245.316	14.90	37.90	31.90	28.00	48.90	54	-5.10	Horizontal			

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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 86 of 114

Test mode:		802.11n(HT20)		Test channel:		Middle		Remark:		Peak	
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
1329.151	6.00	24.70	34.20	56.20	52.70	74	-21.30	Vertical			
4874.000	7.60	34.50	35.10	44.90	51.90	74	-22.10	Vertical			
6545.256	9.00	35.40	33.60	44.00	54.80	74	-19.20	Vertical			
7311.000	10.00	35.70	33.80	45.00	56.90	74	-17.10	Vertical			
9748.000	12.30	37.30	32.10	42.60	60.10	74	-13.90	Vertical			
12267.276	14.90	37.90	31.90	40.60	61.50	74	-12.50	Vertical			
1328.452	6.00	24.70	34.20	49.40	45.90	74	-28.10	Horizontal			
4874.000	7.60	34.50	35.10	44.60	51.60	74	-22.40	Horizontal			
6842.325	9.30	35.30	33.80	45.30	56.10	74	-17.90	Horizontal			
7311.000	10.00	35.70	33.80	44.10	56.00	74	-18.00	Horizontal			
9748.000	12.30	37.30	32.10	42.60	60.10	74	-13.90	Horizontal			
11254.852	13.60	37.50	31.10	41.20	61.20	74	-12.80	Horizontal			

Test mode:		802.11n(HT20)		Test channel:		Middle		Remark:		Average	
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Polarization			
1329.151	6.00	24.70	34.20	29.70	26.20	54	-27.80	Vertical			
4874.000	7.60	34.50	35.10	30.80	37.80	54	-16.20	Vertical			
6545.256	9.00	35.40	33.60	31.50	42.30	54	-11.70	Vertical			
7311.000	10.00	35.70	33.80	31.70	43.60	54	-10.40	Vertical			
9748.000	12.30	37.30	32.10	30.40	47.90	54	-6.10	Vertical			
12267.276	14.90	37.90	31.90	29.00	49.90	54	-4.10	Vertical			
1328.452	6.00	24.70	34.20	30.30	26.80	54	-27.20	Horizontal			
4874.000	7.60	34.50	35.10	30.20	37.20	54	-16.80	Horizontal			
6842.325	9.30	35.30	33.80	32.90	43.70	54	-10.30	Horizontal			
7311.000	10.00	35.70	33.80	31.30	43.20	54	-10.80	Horizontal			
9748.000	12.30	37.30	32.10	29.70	47.20	54	-6.80	Horizontal			
11254.852	13.60	37.50	31.10	29.60	49.60	54	-4.40	Horizontal			

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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 87 of 114

Test mode:		802.11n(HT20)		Test channel:		Highest		Remark:		Peak	
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
1335.005	6.00	24.80	34.20	55.30	51.90	74	-22.10	Vertical			
4924.000	7.60	34.60	35.20	46.10	53.10	74	-20.90	Vertical			
6623.143	9.10	35.40	33.70	45.70	56.50	74	-17.50	Vertical			
7386.000	10.00	35.70	33.90	45.70	57.50	74	-16.50	Vertical			
9848.000	12.30	37.30	32.10	44.00	61.50	74	-12.50	Vertical			
11076.270	13.10	37.60	31.20	43.20	62.70	74	-11.30	Vertical			
1280.420	5.80	24.40	34.10	49.90	46.00	74	-28.00	Horizontal			
4924.000	7.60	34.60	35.20	44.90	51.90	74	-22.10	Horizontal			
6552.322	9.00	35.30	33.70	45.80	56.40	74	-17.60	Horizontal			
7386.000	10.00	35.70	33.90	46.30	58.10	74	-15.90	Horizontal			
9848.000	12.30	37.30	32.10	43.60	61.10	74	-12.90	Horizontal			
11542.264	13.50	37.70	31.60	42.10	61.70	74	-12.30	Horizontal			

Test mode:		802.11n(HT20)		Test channel:		Highest		Remark:		Average	
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Polarization			
1335.005	6.00	24.80	34.20	30.30	26.90	54	-27.10	Vertical			
4924.000	7.60	34.60	35.20	31.90	38.90	54	-15.10	Vertical			
6623.143	9.10	35.40	33.70	32.60	43.40	54	-10.60	Vertical			
7386.000	10.00	35.70	33.90	33.10	44.90	54	-9.10	Vertical			
9848.000	12.30	37.30	32.10	30.60	48.10	54	-5.90	Vertical			
11076.270	13.10	37.60	31.20	30.90	50.40	54	-3.60	Vertical			
1280.420	5.80	24.40	34.10	30.90	27.00	54	-27.00	Horizontal			
4924.000	7.60	34.60	35.20	32.10	39.10	54	-14.90	Horizontal			
6552.322	9.00	35.30	33.70	32.50	43.10	54	-10.90	Horizontal			
7386.000	10.00	35.70	33.90	33.00	44.80	54	-9.20	Horizontal			
9848.000	12.30	37.30	32.10	30.60	48.10	54	-5.90	Horizontal			
11542.264	13.50	37.70	31.60	29.70	49.30	54	-4.70	Horizontal			

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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 88 of 114

Test mode:		802.11n(HT40)		Test channel:		Lowest		Remark:		Peak	
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
1329.151	6.00	24.80	34.20	57.50	54.10	74	-19.90	Vertical			
4844.000	7.60	34.50	35.10	45.40	52.40	74	-21.60	Vertical			
6694.729	9.20	35.30	33.70	45.50	56.30	74	-17.70	Vertical			
7266.000	9.90	35.70	33.80	46.40	58.20	74	-15.80	Vertical			
9688.000	12.10	37.20	32.30	44.00	61.00	74	-13.00	Vertical			
11116.033	13.20	37.60	31.20	42.20	61.80	74	-12.20	Vertical			
1329.151	6.00	24.80	34.20	49.30	45.90	74	-28.10	Horizontal			
4844.000	7.60	34.50	35.10	45.80	52.80	74	-21.20	Horizontal			
6646.919	9.10	35.40	33.70	45.70	56.50	74	-17.50	Horizontal			
7266.000	9.90	35.70	33.80	46.30	58.10	74	-15.90	Horizontal			
9688.000	12.10	37.20	32.30	43.70	60.70	74	-13.30	Horizontal			
12071.249	14.40	37.80	31.80	40.80	61.20	74	-12.80	Horizontal			

Test mode:		802.11n(HT40)		Test channel:		Lowest		Remark:		Average	
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Polarization			
1329.151	6.00	24.80	34.20	29.70	26.30	54	-27.70	Vertical			
4844.000	7.60	34.50	35.10	32.60	39.60	54	-14.40	Vertical			
6694.729	9.20	35.30	33.70	32.20	43.00	54	-11.00	Vertical			
7266.000	9.90	35.70	33.80	33.20	45.00	54	-9.00	Vertical			
9688.000	12.10	37.20	32.30	31.70	48.70	54	-5.30	Vertical			
11116.033	13.20	37.60	31.20	29.90	49.50	54	-4.50	Vertical			
1329.151	6.00	24.80	34.20	29.70	26.30	54	-27.70	Horizontal			
4844.000	7.60	34.50	35.10	31.90	38.90	54	-15.10	Horizontal			
6646.919	9.10	35.40	33.70	32.50	43.30	54	-10.70	Horizontal			
7266.000	9.90	35.70	33.80	33.00	44.80	54	-9.20	Horizontal			
9688.000	12.10	37.20	32.30	31.80	48.80	54	-5.20	Horizontal			
12071.249	14.40	37.80	31.80	28.90	49.30	54	-4.70	Horizontal			

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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 89 of 114

Test mode:		802.11n(HT40)		Test channel:		Middle		Remark:		Peak	
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
1329.152	6.00	24.70	34.20	56.00	52.50	74	-21.50	Vertical			
4874.000	7.60	34.50	35.10	43.30	50.30	74	-23.70	Vertical			
6621.549	9.00	35.40	33.60	43.40	54.20	74	-19.80	Vertical			
7311.000	10.00	35.70	33.80	44.00	55.90	74	-18.10	Vertical			
9748.000	12.30	37.30	32.10	42.00	59.50	74	-14.50	Vertical			
11256.362	13.60	37.50	31.10	40.50	60.50	74	-13.50	Vertical			
1328.542	6.00	24.70	34.20	47.70	44.20	74	-29.80	Horizontal			
4874.000	7.60	34.50	35.10	43.30	50.30	74	-23.70	Horizontal			
6542.395	9.00	35.40	33.60	43.40	54.20	74	-19.80	Horizontal			
7311.000	10.00	35.70	33.80	43.30	55.20	74	-18.80	Horizontal			
9748.000	12.30	37.30	32.10	41.70	59.20	74	-14.80	Horizontal			
11076.270	13.10	37.60	31.20	40.60	60.10	74	-13.90	Horizontal			

Test mode:		802.11n(HT40)		Test channel:		Middle		Remark:		Average	
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Polarization			
1329.152	6.00	24.70	34.20	29.60	26.10	54	-27.90	Vertical			
4874.000	7.60	34.50	35.10	29.20	36.20	54	-17.80	Vertical			
6621.549	9.00	35.40	33.60	31.00	41.80	54	-12.20	Vertical			
7311.000	10.00	35.70	33.80	30.90	42.80	54	-11.20	Vertical			
9748.000	12.30	37.30	32.10	29.60	47.10	54	-6.90	Vertical			
11256.362	13.60	37.50	31.10	29.50	49.50	54	-4.50	Vertical			
1328.542	6.00	24.70	34.20	29.10	25.60	54	-28.40	Horizontal			
4874.000	7.60	34.50	35.10	29.70	36.70	54	-17.30	Horizontal			
6542.395	9.00	35.40	33.60	31.00	41.80	54	-12.20	Horizontal			
7311.000	10.00	35.70	33.80	30.40	42.30	54	-11.70	Horizontal			
9748.000	12.30	37.30	32.10	30.10	47.60	54	-6.40	Horizontal			
11076.270	13.10	37.60	31.20	29.10	48.60	54	-5.40	Horizontal			

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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 90 of 114

Test mode:		802.11n(HT40)		Test channel:		Highest		Remark:		Peak	
Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB/m)	Preamp Factor (dB)	Read Level (dBuV)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
1330.612	6.00	24.80	34.20	56.90	53.50	74	-20.50	Vertical			
4904.000	7.60	34.60	35.20	45.20	52.20	74	-21.80	Vertical			
6611.286	9.00	35.40	33.70	46.10	56.80	74	-17.20	Vertical			
7356.000	10.00	35.60	33.90	46.00	57.70	74	-16.30	Vertical			
9808.000	12.30	37.30	32.10	43.40	60.90	74	-13.10	Vertical			
11500.976	13.50	37.70	31.60	41.90	61.50	74	-12.50	Vertical			
1329.151	6.00	24.80	34.20	52.60	49.20	74	-24.80	Horizontal			
4904.000	7.60	34.60	35.20	45.50	52.50	74	-21.50	Horizontal			
6505.529	8.90	35.20	33.70	45.30	55.70	74	-18.30	Horizontal			
7356.000	10.00	35.70	33.80	46.50	58.40	74	-15.60	Horizontal			
9808.000	12.30	37.30	32.10	43.70	61.20	74	-12.80	Horizontal			
11941.967	14.00	37.70	31.80	41.60	61.50	74	-12.50	Horizontal			

Test mode:		802.11n(HT40)		Test channel:		Highest		Remark:		Average	
Frequency (MHz)	Cable loss (dB)	Antenna factors (dB/m)	Preamp factor (dB)	Reading Level (dBμV)	Emission Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Polarization			
1330.612	6.00	24.80	34.20	29.90	26.50	54	-27.50	Vertical			
4904.000	7.60	34.60	35.20	31.90	38.90	54	-15.10	Vertical			
6611.286	9.00	35.40	33.70	32.60	43.30	54	-10.70	Vertical			
7356.000	10.00	35.60	33.90	33.20	44.90	54	-9.10	Vertical			
9808.000	12.30	37.30	32.10	30.40	47.90	54	-6.10	Vertical			
11500.976	13.50	37.70	31.60	29.90	49.50	54	-4.50	Vertical			
1329.151	6.00	24.80	34.20	29.80	26.40	54	-27.60	Horizontal			
4904.000	7.60	34.60	35.20	31.90	38.90	54	-15.10	Horizontal			
6505.529	8.90	35.20	33.70	32.90	43.30	54	-10.70	Horizontal			
7356.000	10.00	35.70	33.80	32.60	44.50	54	-9.50	Horizontal			
9808.000	12.30	37.30	32.10	31.30	48.80	54	-5.20	Horizontal			
11941.967	14.00	37.70	31.80	29.30	49.20	54	-4.80	Horizontal			

Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

2) Scan from 9kHz to 25GHz, The disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported .

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6.9 Restricted bands around fundamental frequency

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205		
Test Method:	ANSI C63.10 2009		
Test Site:	Measurement Distance: 3m (Semi-Anechoic Chamber)		
Limit:	Frequency	Limit (dBuV/m @3m)	Remark
	30MHz-88MHz	40.0	Quasi-peak Value
	88MHz-216MHz	43.5	Quasi-peak Value
	216MHz-960MHz	46.0	Quasi-peak Value
	960MHz-1GHz	54.0	Quasi-peak Value
	Above 1GHz	54.0	Average Value
		74.0	Peak Value

Test Setup:

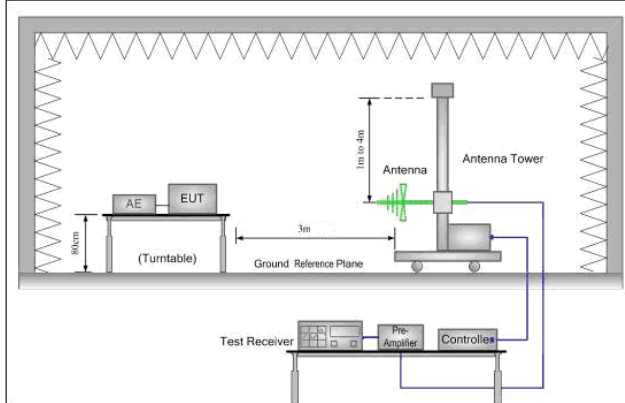


Figure 1. 30MHz to 1GHz

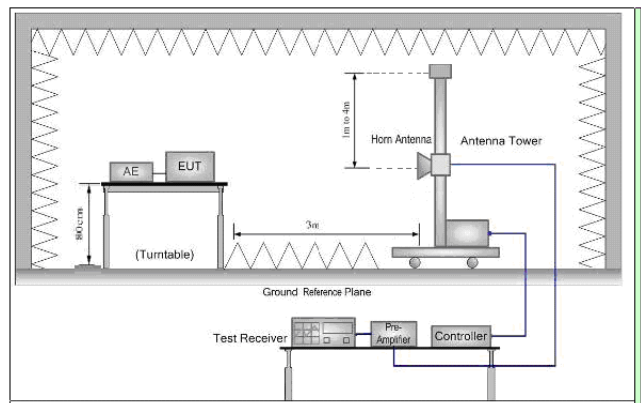


Figure 2. Above 1 GHz



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Report No.: SZEM141100618201

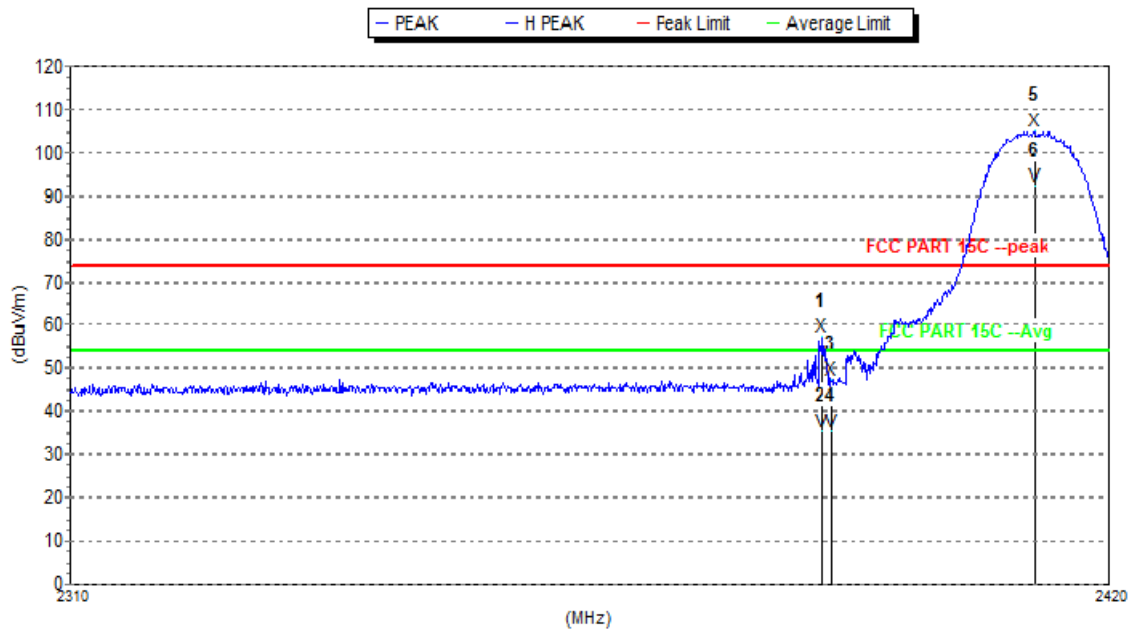
Page: 92 of 114

Test Procedure:	a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel g. Test the EUT in the lowest channel , the Highest channel h. Repeat above procedures until all frequencies measured was complete.
Exploratory Test Mode:	Transmitting with all kind of modulations, data rates. Transmitting mode
Final Test Mode:	Pretest the EUT at Transmitting mode Through Pre-scan, find the 1Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g ; 6.5Mbps of rate is the worst case of 802.11n(HT20) ; 13.5Mbps of rate is the worst case of 802.11n(HT40) Only the worst case is recorded in the report.
Instruments Used:	Refer to section 5.10 for details
Test Results:	Pass



Test plot as follows:

802.11b:



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Aux.F.(dB)	Pol.
Peak:									
1	2389.090	57.4	74.0	16.6	28.7	34.8	4.6	0.0	H
2	2390.000	47.3	74.0	26.7	28.7	34.8	4.6	0.0	H
3 F	2411.860	105.0	74.0	-31.0	28.8	34.9	4.6	0.0	H
Avg									
1	2389.090	35.3	54.0	18.7	28.7	34.8	4.6	0.0	H
2	2390.000	35.4	54.0	18.6	28.7	34.8	4.6	0.0	H
3 F	2411.860	92.2	54.0	-38.2	28.8	34.9	4.6	0	H

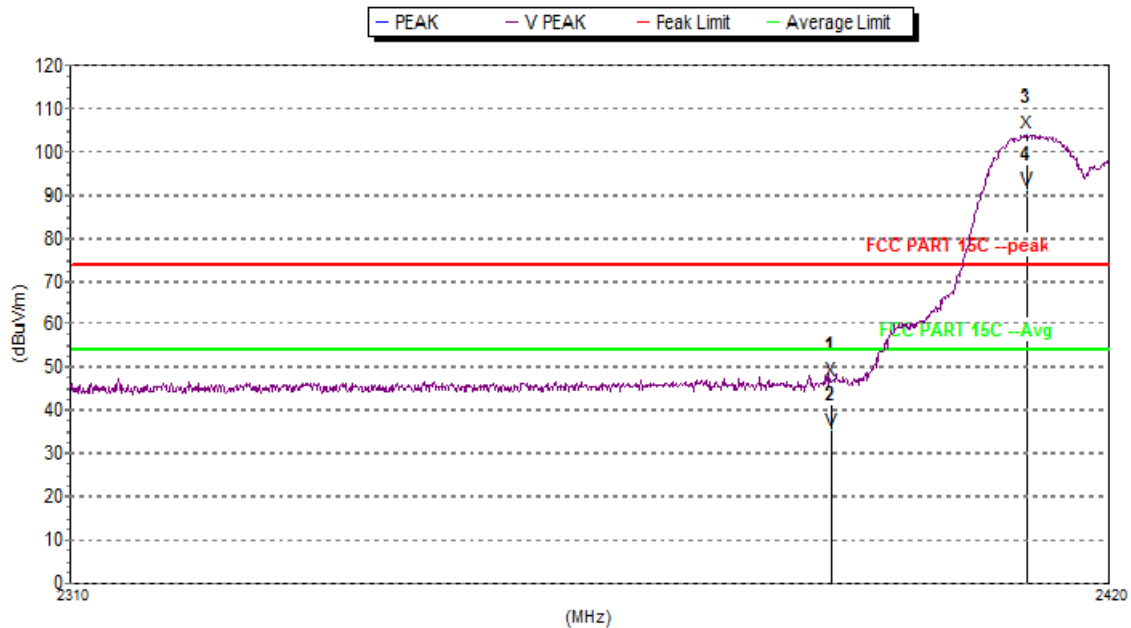




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Report No.: SZEM141100618201

Page: 94 of 114



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Aux.F.(dB)	Pol.
Peak:									
1	2390.000	46.9	74.0	27.1	28.7	34.8	4.6	0.0	V
2 F	2410.980	104.3	74.0	-30.3	28.8	34.9	4.6	0.0	V
Avg									
1	2390.000	35.4	54.0	18.6	28.7	34.8	4.6	0.0	V
2 F	2410.980	91.3	54.0	-37.3	28.8	34.9	4.6	0	V

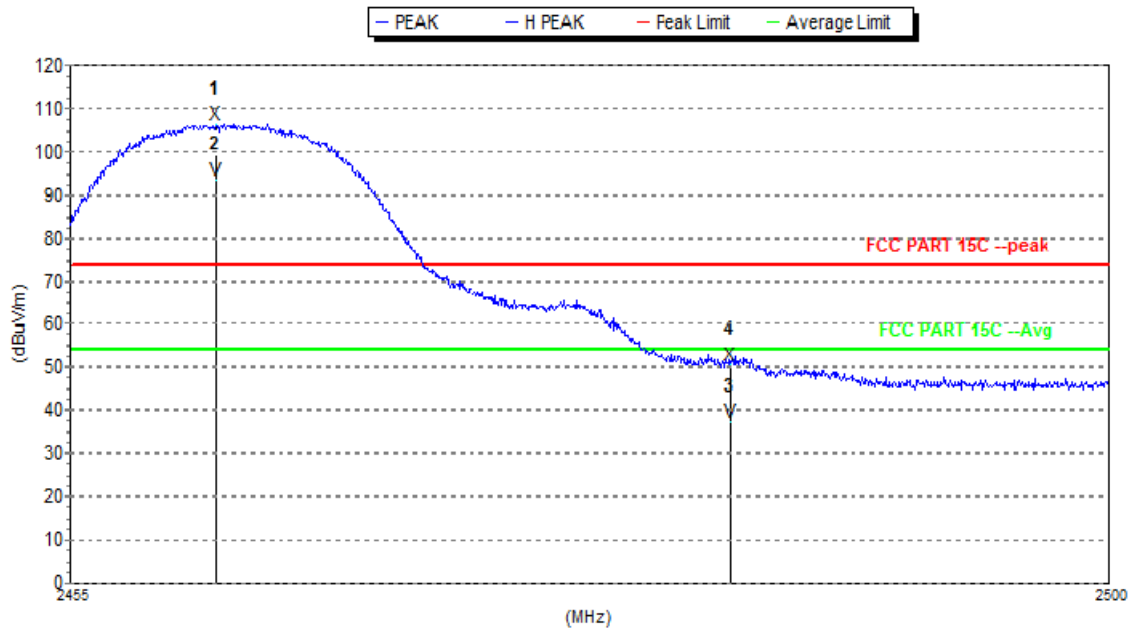
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Report No.: SZEM141100618201

Page: 95 of 114



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Aux.F.(dB)	Pol.
Peak:									
1 F	2461.300	106.4	74.0	-32.4	29.2	35.0	4.6	0.0	H
2	2483.500	50.7	74.0	23.3	29.3	35.0	4.5	0	H
Avg									
1 F	2461.300	93.6	54.0	-39.6	29.2	35.0	4.6	0.0	H
2	2483.500	37.3	54.0	16.7	29.3	35.0	4.5	0.0	H

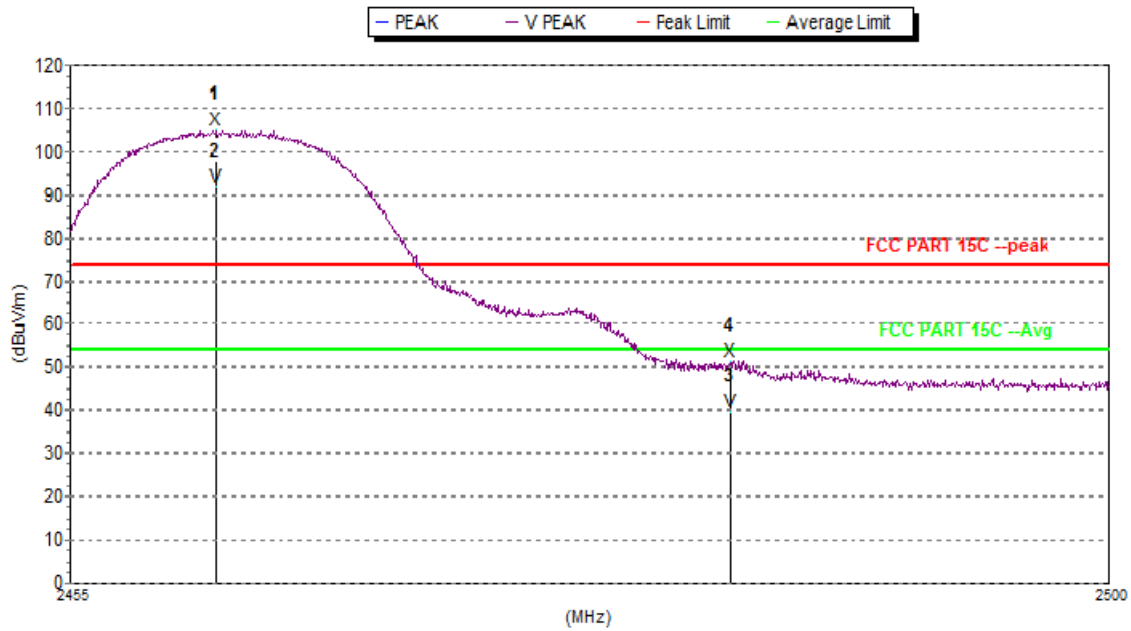
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Report No.: SZEM141100618201

Page: 96 of 114



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Aux.F.(dB)	Pol.
Peak:									
1 F	2461.300	105.0	74.0	-31.0	29.2	35.0	4.6	0.0	V
2	2483.500	51.3	74.0	22.7	29.3	35.0	4.5	0.0	V
Avg									
1 F	2461.300	92.1	54.0	-38.1	29.2	35.0	4.6	0.0	V
2	2483.500	39.8	54.0	14.2	29.3	35.0	4.5	0	V

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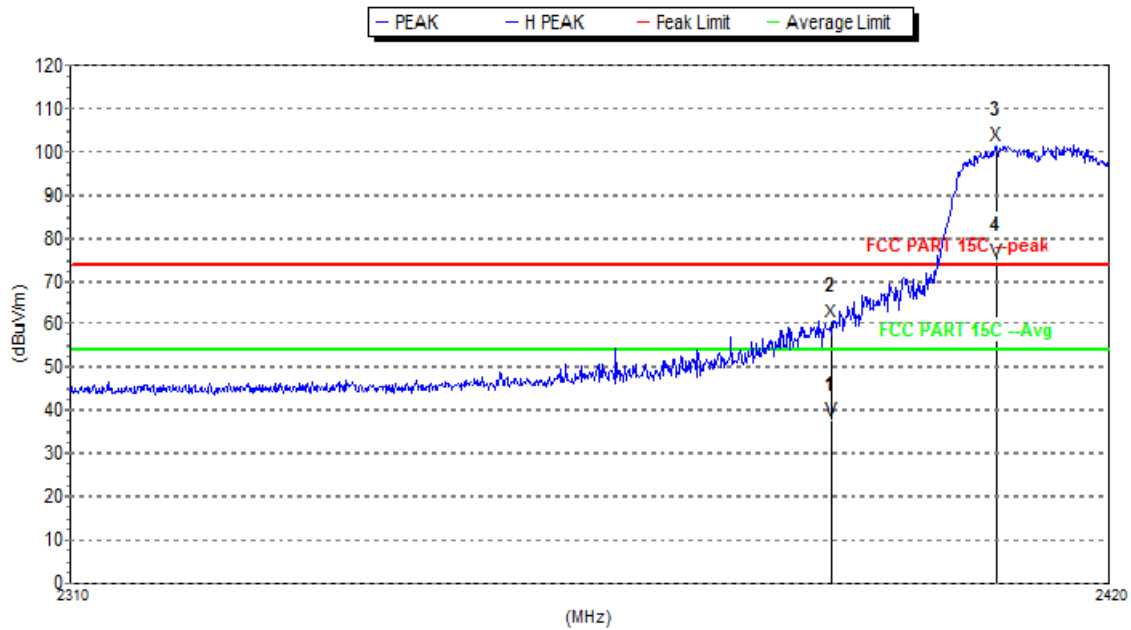


SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 97 of 114

802.11g:



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Aux.F.(dB)	Pol.
Peak:									
1	2390.000	60.8	74.0	13.2	28.7	34.8	4.6	0.0	H
2 F	2407.790	101.6	74.0	-27.6	28.8	34.9	4.6	0.0	H
Avg									
1	2390.000	37.6	54.0	16.4	28.7	34.8	4.6	0.0	H
2 F	2407.790	74.7	54.0	-20.7	28.8	34.9	4.6	0	H

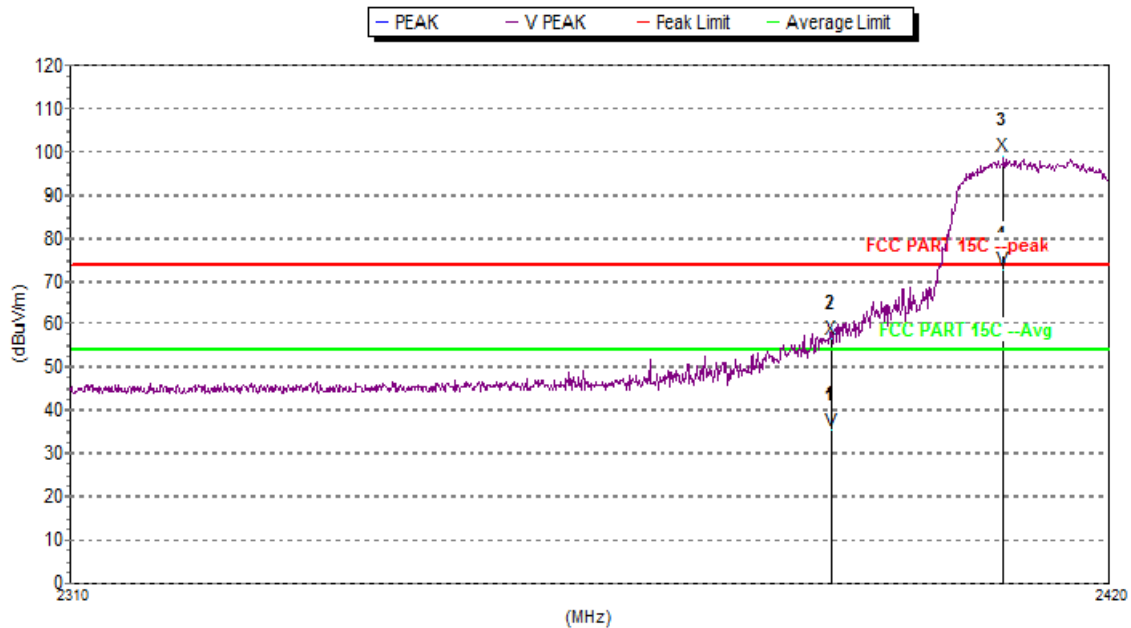
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Report No.: SZEM141100618201

Page: 98 of 114



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Aux.F.(dB)	Pol.
Peak:									
1	2390.000	56.4	74.0	17.6	28.7	34.8	4.6	0.0	V
2 F	2408.560	99.0	74.0	-25.0	28.8	34.9	4.6	0.0	V
Avg									
1	2390.000	35.5	54.0	18.5	28.7	34.8	4.6	0.0	V
2 F	2408.560	72.6	54.0	-18.6	28.8	34.9	4.6	0	V

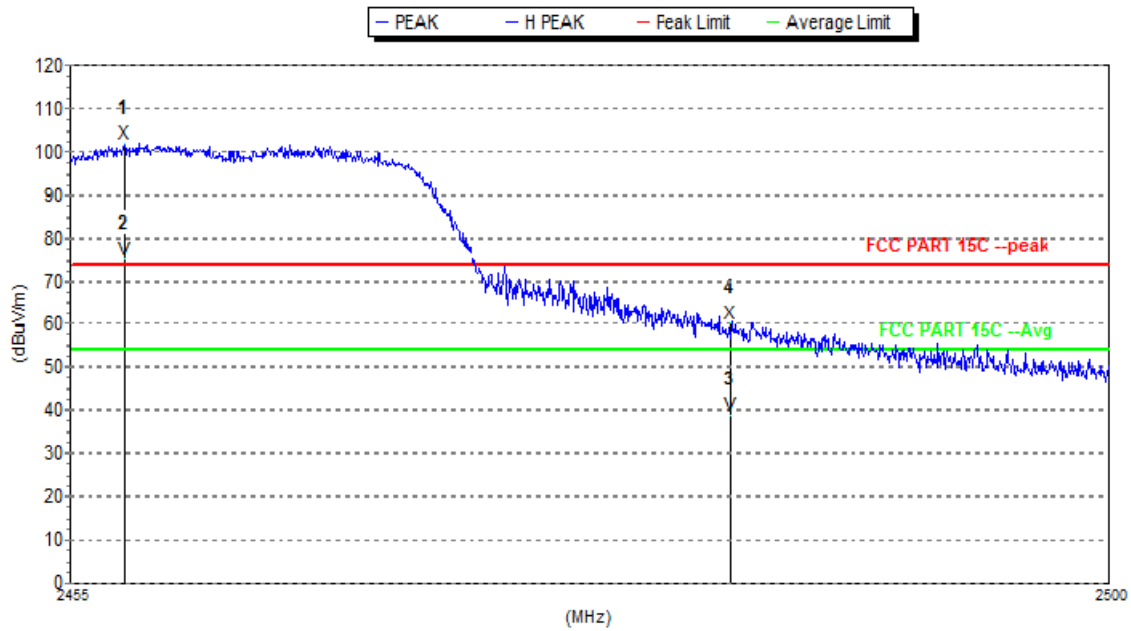
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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 99 of 114



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Aux.F.(dB)	Pol.
Peak:									
1 F	2457.385	102.1	74.0	-28.1	29.1	35.0	4.6	0.0	H
2	2483.500	60.3	74.0	13.7	29.3	35.0	4.5	0.0	H
Avg									
1 F	2457.385	75.1	54.0	-21.1	29.1	35.0	4.6	0.0	H
2	2483.500	38.9	54.0	15.1	29.3	35.0	4.5	0.0	H

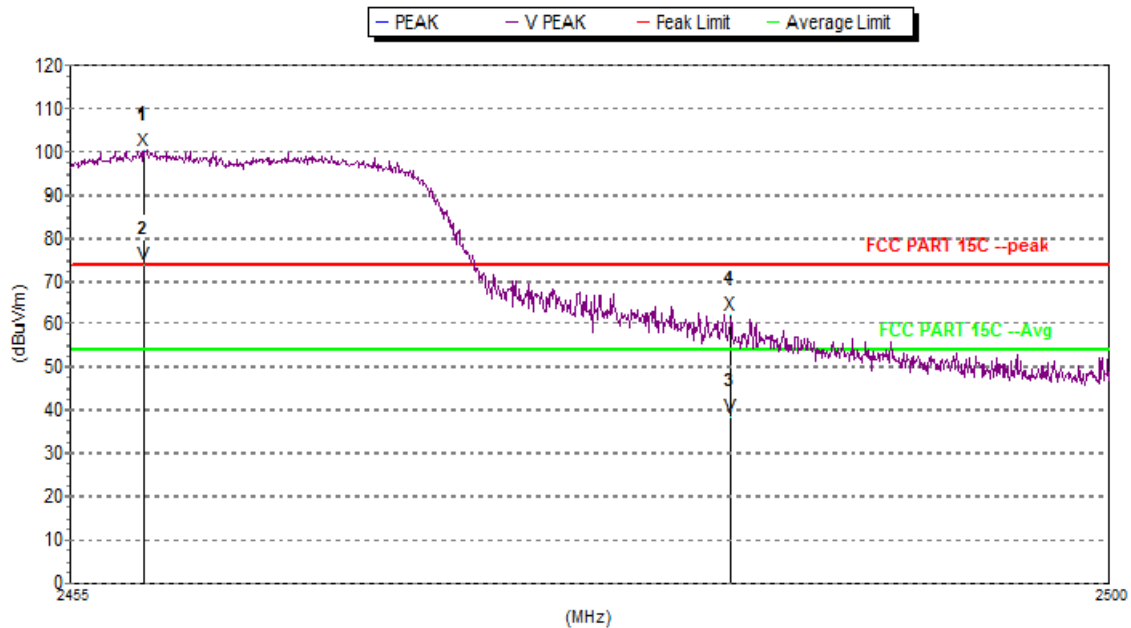
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Report No.: SZEM141100618201

Page: 100 of 114



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Aux.F.(dB)	Pol.
Peak:									
1 F	2458.240	100.4	74.0	-26.4	29.1	35.0	4.6	0.0	V
2	2483.500	62.2	74.0	11.8	29.3	35.0	4.5	0.0	V
Avg									
1 F	2458.240	74.0	54.0	-20.0	29.1	35.0	4.6	0.0	V
2	2483.500	38.4	54.0	15.6	29.3	35.0	4.5	0.0	V

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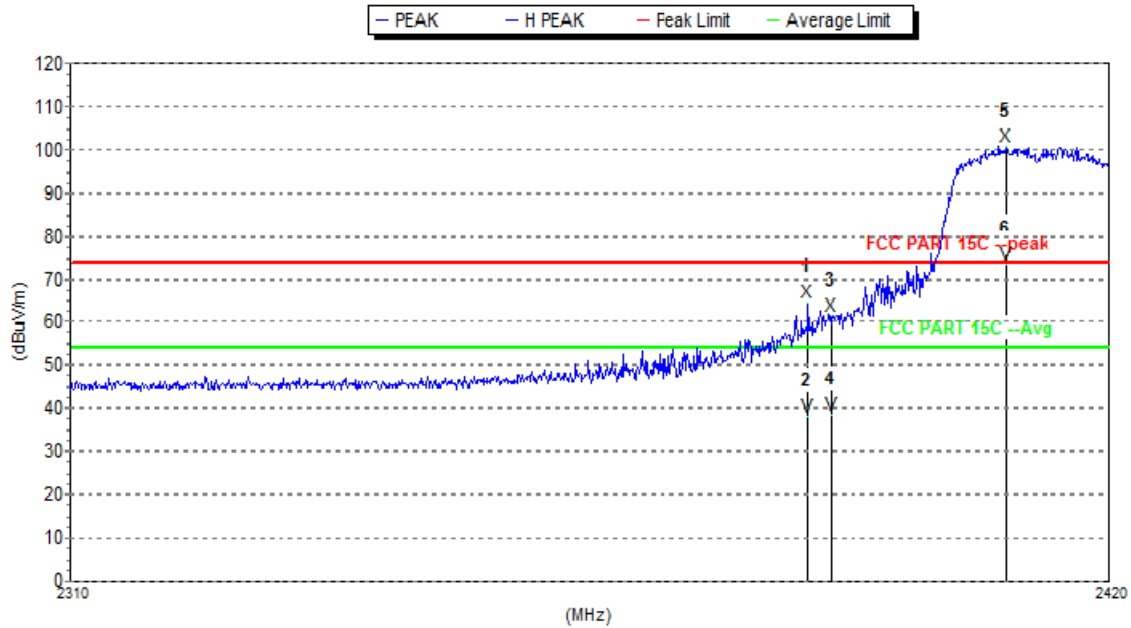


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Report No.: SZEM141100618201

Page: 101 of 114

802.11n(HT20):



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Aux.F.(dB)	Pol.
Peak:									
1	2387.550	64.6	74.0	9.4	28.7	34.8	4.6	0.0	H
2	2390.000	61.5	74.0	12.5	28.7	34.8	4.6	0.0	H
3 F	2408.890	100.9	74.0	-26.9	28.8	34.9	4.6	0.0	H
Avg									
1	2387.550	38.1	54.0	15.9	28.7	34.8	4.6	0.0	H
2	2390.000	38.4	54.0	15.6	28.7	34.8	4.6	0.0	H
3 F	2408.890	73.6	54.0	-19.6	28.8	34.9	4.6	0.0	H

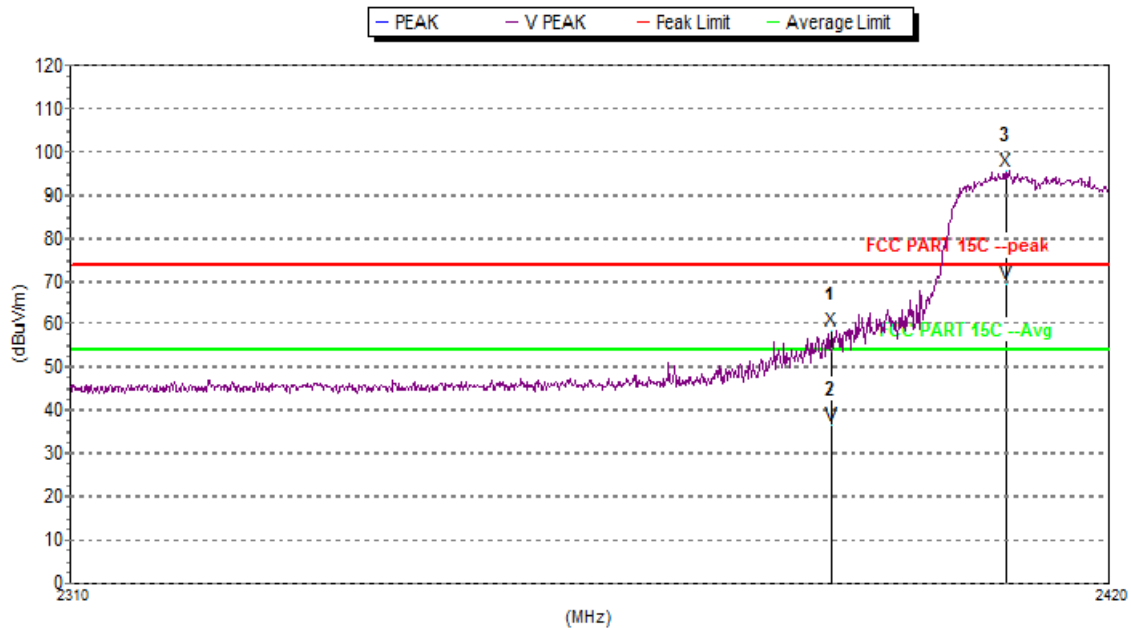
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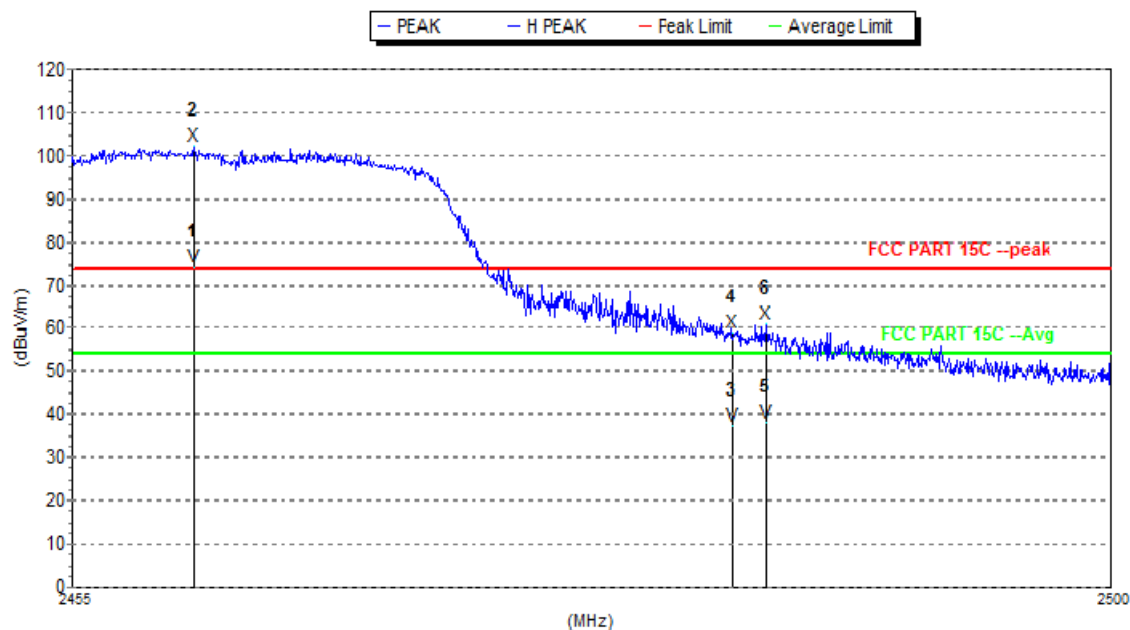
Report No.: SZEM141100618201

Page: 102 of 114



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Aux.F.(dB)	Pol.
Peak:									
1	2390.000	58.6	74.0	15.4	28.7	34.8	4.6	0.0	V
2 F	2408.780	95.6	74.0	-21.6	28.8	34.9	4.6	0.0	V
Avg									
1	2390.000	36.5	54.0	17.5	28.7	34.8	4.6	0.0	V
2 F	2408.780	69.5	54.0	-15.5	28.8	34.9	4.6	0	V

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Peak:									
1 F	2460.265	102.2	74.0	-28.2	29.2	35.0	4.6	0.0	H
2	2483.500	59.1	74.0	14.9	29.3	35.0	4.5	0.0	H
3	2484.970	61.0	74.0	13.0	29.3	35.0	4.5	0.0	H
Avg									
1 F	2460.265	74.3	54.0	-20.3	29.2	35.0	4.6	0.0	H
2	2483.500	37.5	54.0	16.5	29.3	35.0	4.5	0.0	H
3	2484.970	38.1	54.0	15.9	29.3	35.0	4.5	0.0	H



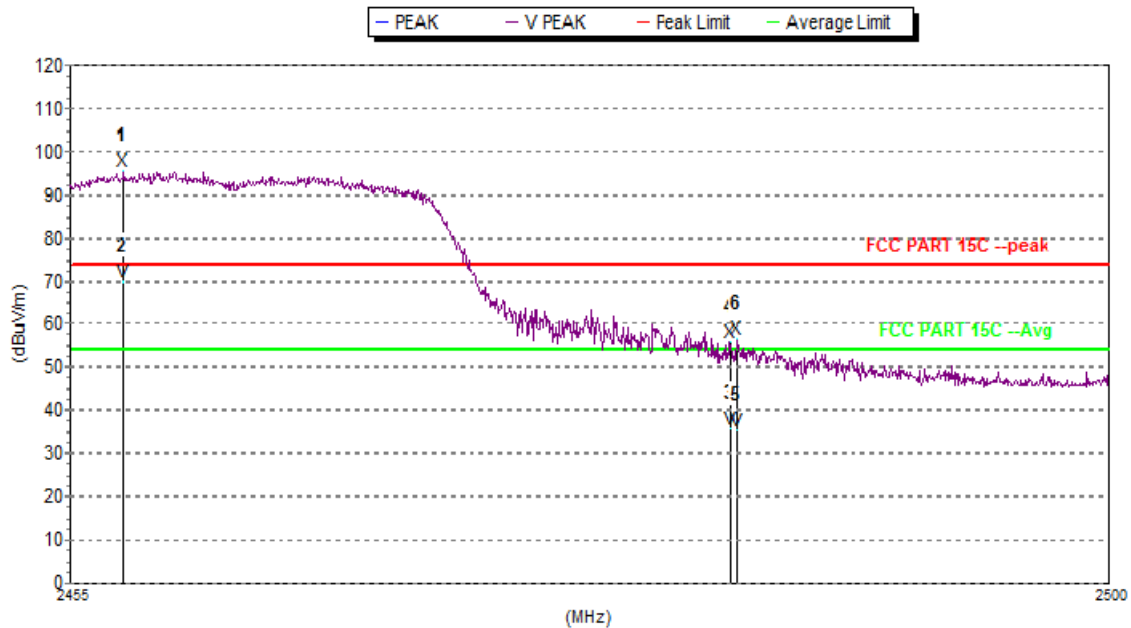
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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 104 of 114



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Aux.F.(dB)	Pol.
Peak:									
1 F	2457.340	95.5	74.0	-21.5	29.1	35.0	4.6	0.0	V
2	2483.500	55.7	74.0	18.3	29.3	35.0	4.5	0.0	V
3	2483.800	56.4	74.0	17.6	29.3	35.0	4.5	0.0	V
Avg									
1 F	2457.340	69.7	54.0	-15.7	29.1	35.0	4.6	0.0	V
2	2483.500	35.8	54.0	18.2	29.3	35.0	4.5	0.0	V
3	2483.800	35.4	54.0	18.6	29.3	35.0	4.5	0	V

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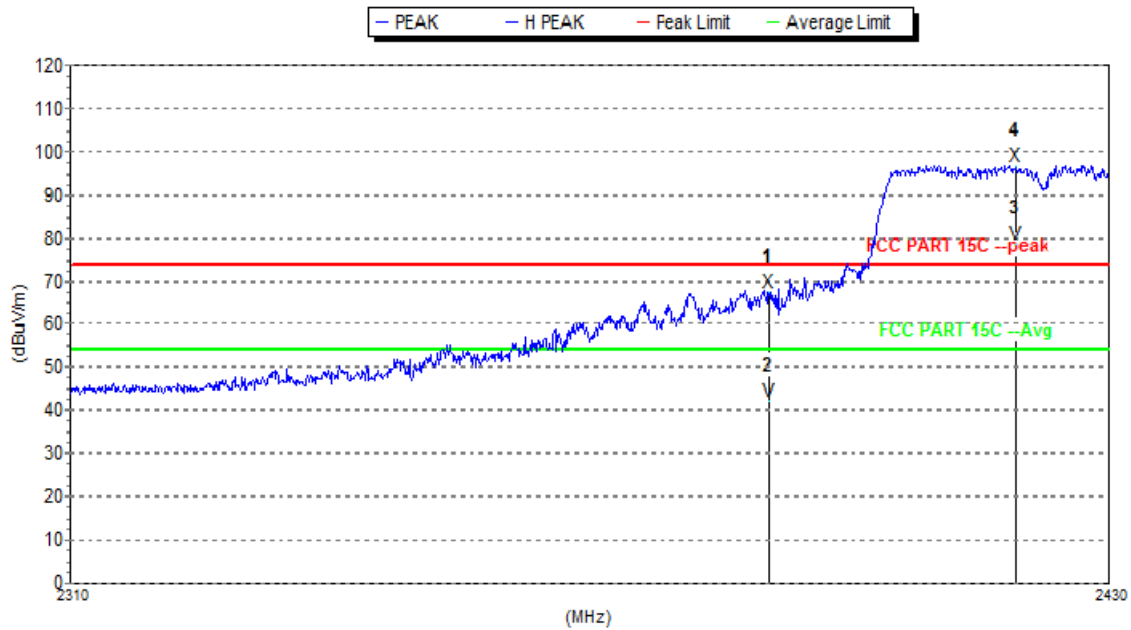


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Report No.: SZEM141100618201

Page: 105 of 114

802.11n(HT40):



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Aux.F.(dB)	Pol.
Peak:									
1	2390.000	67.4	74.0	6.6	28.7	34.8	4.6	0.0	H
2 F	2418.960	96.9	74.0	-22.9	28.9	34.9	4.6	0.0	H
Avg									
1	2390.000	42.3	54.0	11.7	28.7	34.8	4.6	0.0	H
2 F	2418.960	78.6	54.0	-24.6	28.9	34.9	4.6	0	H

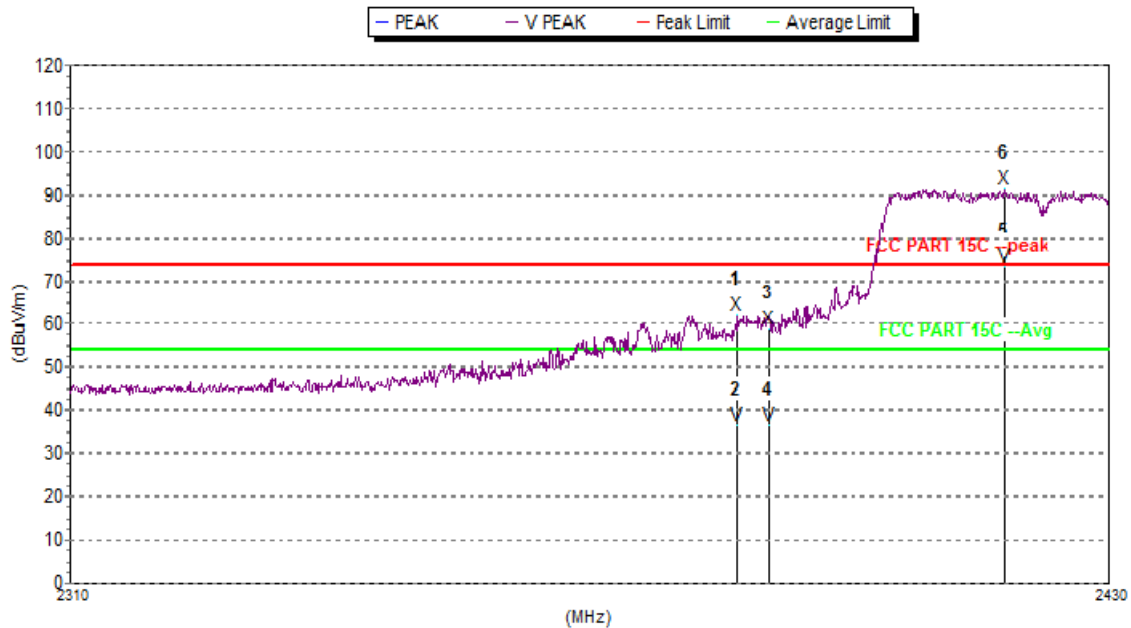
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Report No.: SZEM141100618201

Page: 106 of 114



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Aux.F.(dB)	Pol.
Peak:									
1	2386.440	62.1	74.0	11.9	28.7	34.8	4.6	0.0	V
2	2390.000	59.1	74.0	14.9	28.7	34.8	4.6	0.0	V
3 F	2417.520	91.5	74.0	-17.5	28.9	34.9	4.6	0.0	V
Avg									
1	2386.440	36.6	54.0	17.4	28.7	34.8	4.6	0.0	V
2	2390.000	36.4	54.0	17.6	28.7	34.8	4.6	0.0	V
3 F	2417.520	73.4	54.0	-19.4	28.9	34.9	4.6	0	V

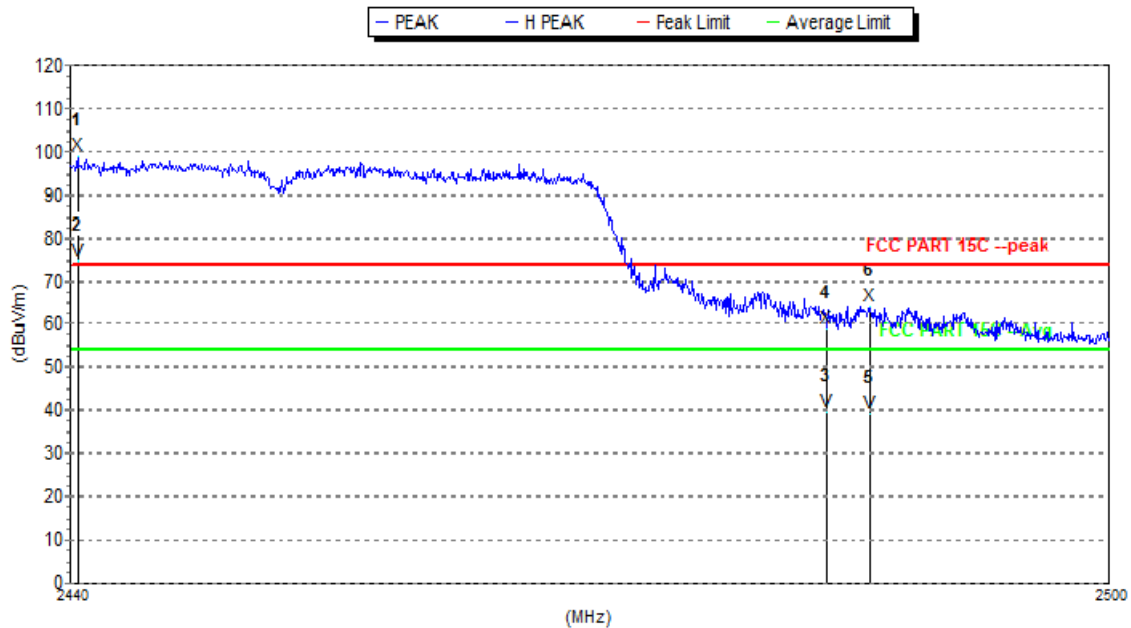
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Report No.: SZEM141100618201

Page: 107 of 114



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Aux.F.(dB)	Pol.
Peak:									
1 F	2440.420	99.2	74.0	-25.2	29.0	34.9	4.6	0.0	H
2	2483.500	59.0	74.0	15.0	29.3	35.0	4.5	0.0	H
3	2486.080	64.4	74.0	9.6	29.3	35.0	4.5	0.0	H
Avg									
1 F	2440.420	74.7	54.0	-20.7	29.0	34.9	4.6	0.0	H
2	2483.500	39.6	54.0	14.4	29.3	35.0	4.5	0.0	H
3	2486.080	39.3	54.0	14.7	29.3	35.0	4.5	0	H

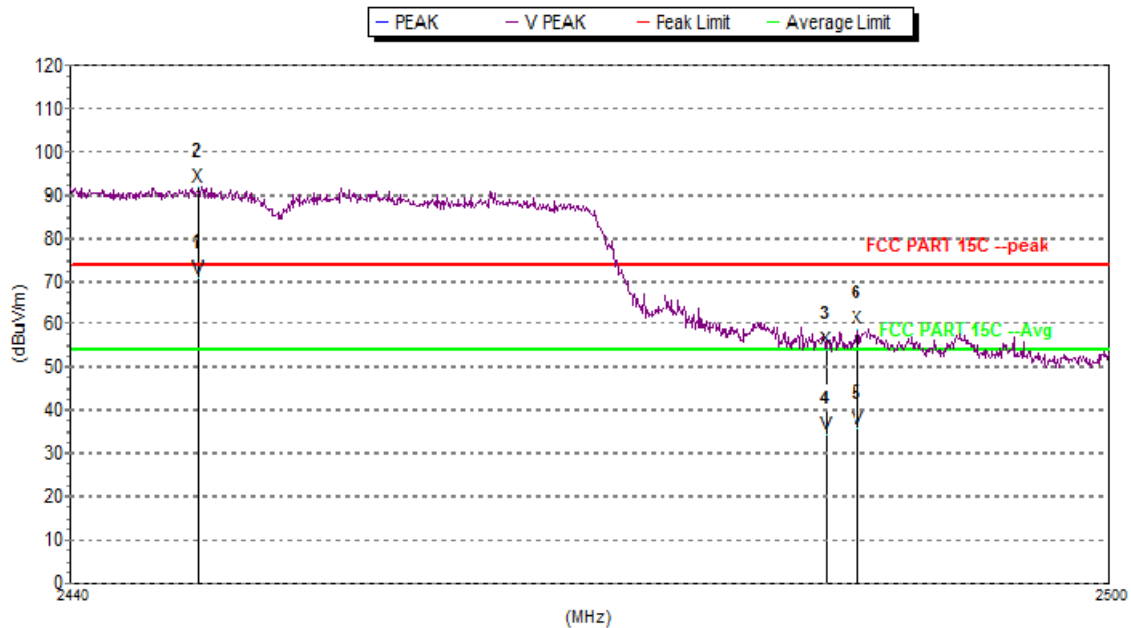
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SGS-CSTC Standards Technical Services Ltd.

Report No.: SZEM141100618201

Page: 108 of 114



Mk.	Freq.(MHz)	Level(dBuV/m)	Limit(dBuV/m)	Margin(dB)	Ant.F.(dB/m)	Amp.G.(dB)	Cbl.L.(dB)	Aux.F.(dB)	Pol.
Peak:									
1 F	2447.310	91.8	74.0	-17.8	29.1	34.9	4.5	0.0	V
2	2483.500	54.1	74.0	19.9	29.3	35.0	4.5	0.0	V
3	2485.360	58.8	74.0	15.2	29.3	35.0	4.5	0.0	V
Avg									
1 F	2447.310	70.5	54.0	-16.5	29.1	34.9	4.5	0.0	V
2	2483.500	34.7	54.0	19.3	29.3	35.0	4.5	0.0	V
3	2485.360	35.7	54.0	18.3	29.3	35.0	4.5	0	V

Note:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

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7 Photographs

Test model No.: P1860

7.1 Conducted Emission Test Setup

Front View



Left View



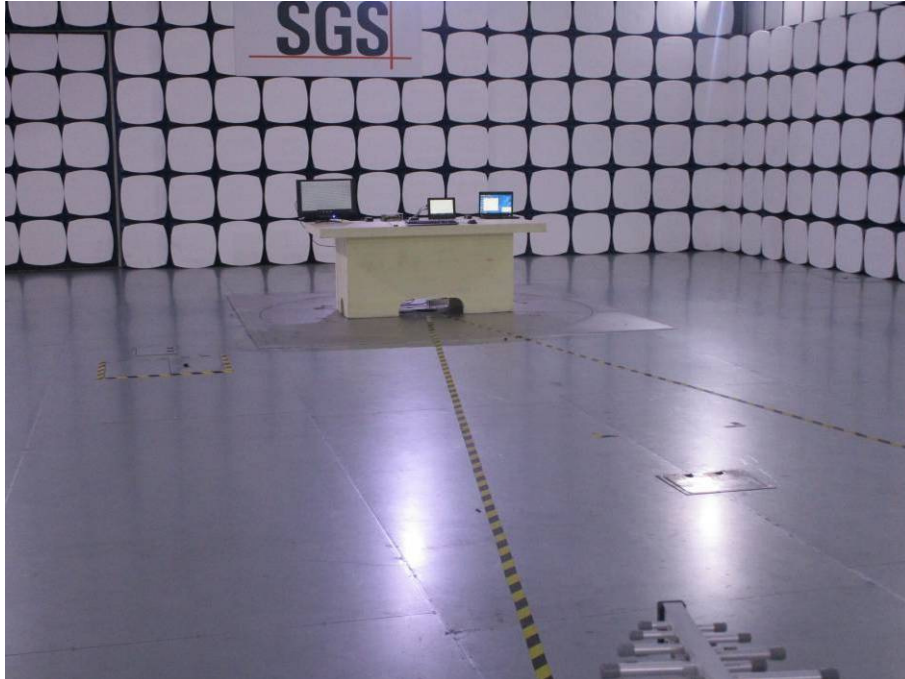
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Right view



7.2 Radiated Disturbance(30MHz-1GHz) Test Setup

Front view



Back view

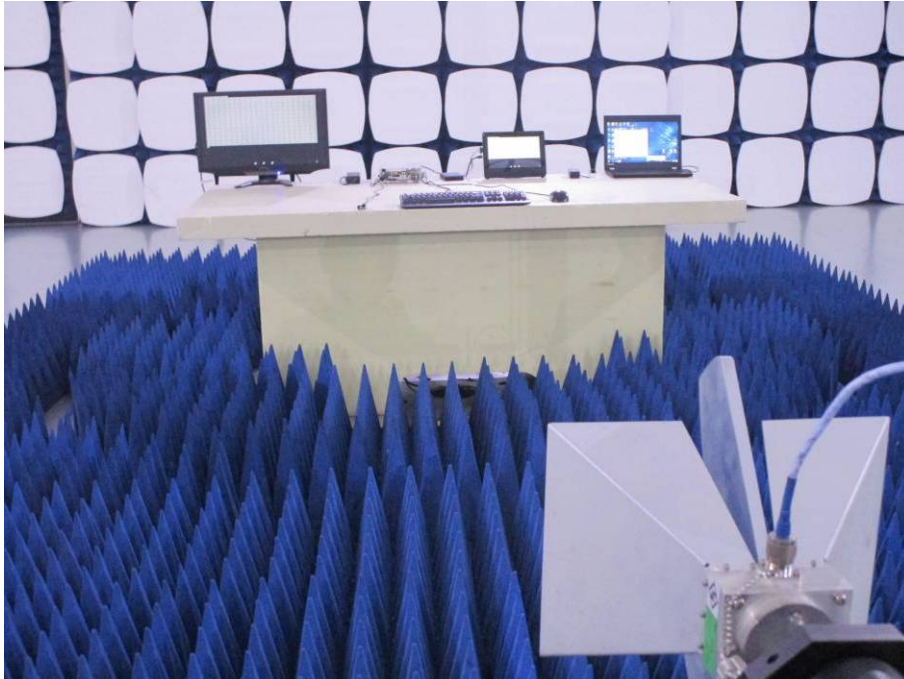


Left view



7.3 Radiated Disturbance(above 1GHz) Test Setup

Front view



Back view



Left view



Right view



7.4 EUT Constructional Details

Refer to Appendix A for Photographs of EUT Constructional Details SZEM1411006182CR.

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