



FCC 47 CFR PART 15 SUBPART C

TEST REPORT

For

Applicant : Harvest Bloom Limited

Address : Flat/Rm 19, Blk B, 2/F, Sheung Shui Plaza, Sheung Shui. NT. HK

Product Name : GSM Mobile Phone

Model Name : T106i, WG3, WG5, WG6, W9630, WE72, T518i, T108i, W3000, W5000, W6000

Brand Name : Tiger

FCC ID : XQF-T106I

Report No. : SZSTS090808F5

Date of Issue : September 07,2009

Issued by : Shenzhen Super Test Service Technology Co., Ltd.

Address : No. 813 Unit A, HuaMeiJu Business Center, Xinhua Road, Bao'an District, Shenzhen, China

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1. VERIFICATION OF CONFORMITY

Equipment Under Test: GSM MOBILE PHONE
Brand Name: Tiger
Model Number: T106i, WG3, WG5, WG6, W9630, WE72, T518i, T108i, W3000, W5000, W6000
FCC ID: XQF-T106I
Applicant: Harvest Bloom Limited
Flat/Rm 19, Blk B, 2/F, Sheung Shui Plaza, Sheung Shui.NT.HK
Manufacturer: Shenzhen Tiger Technology Co.,Ltd
Rm CDE, 8th Floor, Shangbu Building, Shangbu South Road, Futian District, Shenzhen, China
Technical Standards: 47 CFR Part 15 Subpart C
File Number: SZSTS090808F5
Date of test: August.29, 2009 – September.07, 2009
Deviation: None
Condition of Test Sample: Normal
Test Result: PASS

The above equipment was tested by Shenzhen Super Test Service Technology Co., Ltd. for compliance with the requirements set forth in FCC rules and the Technical Standards mentioned above. This said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment and the level of the immunity endurance of the equipment are within the compliance requirements.

The test results of this report relate only to the tested sample identified in this report.

Tested by (+ signature):

- Petter Ping 2009.9.7
Petter Ping September 7, 2009


Review by (+ signature):

- July Wen September 7, 2009
July Wen September 7, 2009


Approved by (+ signature):

- Terry Yang September 7, 2009
Terry Yang September 7, 2009

2. GENERAL INFORMATION

2.1 Product Information

EUT1- Mobile Phone	
Description:	GSM Mobile Phone
Model Name:	T106i
Model Difference description:	Same PCB board with different appearance and color.
IMEI No.:	---
Serial No.:	---
Hardware Version:	E706-PCB-V1.2
Software Version:	E706-GXT 2.01.0
EUT2- Battery	
Description:	Lithium-ion Battery
Model Name:	T403554
Brand Name:	Tiger
Manufacturer:	Shenzhen ShiBang WeiYe Technology Co., Ltd
Capacitance:	1000 mAh
Rated Voltage:	3.7V
Charge Limit:	4.2V
EUT3 – Power Supply	
Description:	Travel Charger
Model Name:	NBT-005E-050
Brand Name:	Tiger
Manufacturer:	Shenzhen Nanbang Electronic Co., Ltd
Rated Input:	AC 110-240V,50/60HZ, 0.15A
Rated Output:	DC 5.0V, 500mA
Length DC USB cable:	1.00m

NOTE:

1. Please refer to Appendix I for the photographs of the EUT. For a more detailed features description about the EUT, please refer to User's Manual.

2.2 Objective

The objective of the report is to perform tests according to 47 CFR Part 15 Subpart C (Bluetooth, 2.4GHz ISM band radiators) for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15 (10-1-05 Edition)	Radio Frequency Devices

2.3 Test Standards and Results

Test items and the results are as bellow:

No.	Section	Description	Result	Date of Test
1	§15.247(a)	6 dB Bandwidth	PASS	2009-9-04
2	§15.247(b)	Maximum Peak Output Power	PASS	2009-9-04
3	§15.247(c)	Power Spectrum Density	PASS	2009-9-04
4	§15.247(c)	Conducted Spurious Emission	PASS	2009-9-04
5	§15.247(d)	Band Edge	PASS	2009-9-04

Note: 1. The test result judgment is decided by the limit of measurement standard
 2. The information of measurement uncertainty is available upon the customer's request.

2.4 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

- Temperature: 15-35°C
- Humidity: 30-60 %
- Atmospheric pressure: 86-106 kPa

3. TEST FACILITY

Test Site: Most Technology Service Co.,ltd

Location: Add: No.5, Nangshan 2nd Rd., North Hi-Tech Industrial park , Nanshan Shenzhen, Guangdong ,China

Description: There is one 3m semi-anechoic an area test sites and two line conducted labs for final test. The Open Area Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4 and CISPR 16 requirements. The FCC Registration Number is **490827**.

Site Filing: The site description is on file with the Federal Communications Commission, 7435 Oakland Mills Road, Columbia, MD 21046.

Instrument Tolerance: All measuring equipment is in accord with ANSI C63.4 and CISPR 16 requirements that meet industry regulatory agency and accreditation agency requirement.

Ground Plane: Two conductive reference ground planes were used during the Line Conducted Emission, one in vertical and the other in horizontal. The dimensions of these ground planes are as below. The vertical ground plane was placed distancing 40 cm to the rear of the wooden test table on where the EUT and the support equipment were placed during test. The horizontal ground plane projected 50 cm beyond the footprint of the EUT system and distanced 80 cm to the wooden test table. For Radiated Emission Test, one horizontal conductive ground plane extended at least 1m beyond the periphery of the EUT and the largest measuring antenna, and covered the entire area between the EUT and the antenna. It has no holes or gaps having longitudinal dimensions larger than one-tenth of a wavelength at the highest frequency of measurement up to 1GHz.

4. TEST EQUIPMENT LIST

Instrumentation: The following list contains equipment used at Most for testing. The equipment conforms to the CISPR 16-1 / ANSI C63.2 Specifications for Electromagnetic Interference and Field Strength Instrumentation from 10 kHz to 1.0 GHz or above.

No.	Equipment	Manufacturer	Model No.	S/N	Calculator due date
1	Test Receiver	Rohde & Schwarz	ESCI	100492	2010/03/14
2	L.I.S.N.	Rohde & Schwarz	ENV216	100093	2010/03/14
3	Coaxial Switch	Anritsu Corp	MP59B	6200283933	2010/03/14
4	Terminator	Hubersuhner	50Ω	No.1	2010/03/14
5	RF Cable	SchwarzBeck	N/A	No.1	2010/03/14
6	Test Receiver	Rohde & Schwarz	ESPI	101202	2010/03/14
7	Bilog Antenna	Sunol	JB3	A121206	2010/03/14
8	Cable	Resenberger	N/A	NO.1	2010/03/14
9	Cable	SchwarzBeck	N/A	NO.2	2010/03/14
10	Cable	SchwarzBeck	N/A	NO.3	2010/03/14
11	DC Power Filter	DuoJi	DL2×30B	N/A	2010/03/14
12	Single Phase Power Line Filter	DuoJi	FNF 202B30	N/A	2010/03/14
13	3 Phase Power Line Filter	DuoJi	FNF 402B30	N/A	2010/03/14
14	Test Receiver	Rohde & Schwarz	ESCI	100492	2010/03/14
15	Absorbing Clamp	Luthi	MDS21	3635	2010/03/14
16	Coaxial Switch	Anritsu Corp	MP59B	6200283933	2010/03/14
17	AC Power Source	Kikusui	AC40MA	LM003232	2010/03/14
18	Test Analyzer	Kikusui	KHA1000	LM003720	2010/03/14
19	Line Impedance Network	Kikusui	LIN40MA-PCR-L	LM002352	2010/03/14
20	ESD Tester	Kikusui	KES4021	LM003537	2010/03/14
21	EMCPRO System	EM Test	UCS-500-M4	V0648102026	2010/03/14
22	Signal Generator	IFR	2032	203002/100	2010/03/14
23	Amplifier	A&R	150W1000	301584	2010/03/14
24	CDN	FCC	FCC-801-M2-25	47	2010/03/14
25	CDN	FCC	FCC-801-M3-25	107	2010/03/14
26	EM Injection Clamp	FCC	F-203I-23mm	403	2010/03/14
27	RF Cable	MIYAZAKI	N/A	No.1/No.2	2010/03/14
28	Universal Radio Communication Tester	ROHDE&SCHWARZ	CMU200	0304789	2010/03/14
29	Telecommunication Antenna	European Antennas	PSA 75301R/170	0304213	2010/03/14

NOTE: Equipments listed above have been calibrated and are in the period of validation.

5. 47 CFR Part 15C Requirements

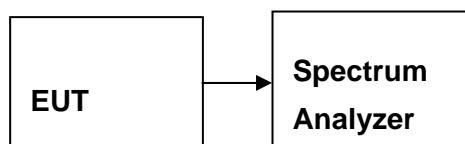
5.1 6dB Bandwidth Measurement

5.1.1 Definition

According to FCC section 15.247(a) (2), System using digital modulation techniques may operate in the 902-928MHz, 2400-2483.5MHz and 5725-5850MHz bands, the minimum 6dB bandwidth shall be at least 500 KHz.

5.1.2 Test Description

Test Setup:



5.1.3 Test Procedure

1. Place the EUT on the table and set it in the transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW = 100 kHz, VBW = RBW, Span = 20MHz, Sweep = auto.
4. Mark the peak frequency and -6dB (upper and lower) frequency.
5. Repeat until all the rest channels are investigated.

5.1.4 EUT Setup and Operating Conditions

Controlled by an embedded test program provided by applicant, the EUT was set to continuous transmitting at maximum peak output power and different data rate(802.11b 11Mbps,802.11g 54Mbps),Lowest ,middle and highest channel were measured respectively.

5.1.5 Test Result

802.11b

Channel	Frequency (MHz)	Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
Low	2412	12850	>500	PASS
Mid	2437	12900		PASS
High	2472	12950		PASS

802.11g

Channel	Frequency (MHz)	Bandwidth (kHz)	Limit (kHz)	Margin (kHz)
Low	2412	16600	>500	PASS
Mid	2437	16600		PASS
High	2462	16600		PASS

5.2 Maximum Peak Output Power

5.2.1 Requirement

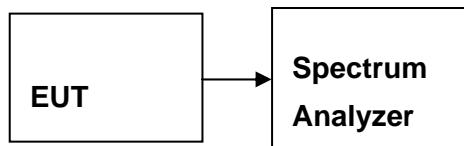
The maximum peak output power of the intentional radiator shall not exceed the following:

1. For systems using digital modulation in the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz: 1 watt.
2. Except as shown in paragraphs (b) (3) (i), (ii) and (iii) of this section, if transmitting antennas of directional gain greater than 6 dBi are used the peak output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1) or (b)(2) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.2.2 Test Procedure

The EUT was connected to the Power Meter. The radio frequency load attached to the EUT antenna terminal was 50 Ohm. The loss of the cables and the test system is calibrated to correct the reading.

5.2.3 Test Setup



5.2.4 EUT Setup and Operating Conditions

Controlled by an embedded test program provided by applicant, the EUT was set to continuous transmitting at maximum peak output power and different data rate(802.11b 11Mbps,802.11g 54Mbps), Lowest ,middle and highest channel were measured respectively.

5.2.5 Test Result

802.11b

Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (W)	Limit (W)	Result
Low	2412	10.07	0.010	1	PASS
Mid	2437	10.06	0.010		PASS
High	2472	10.94	0.012		PASS

802.11g

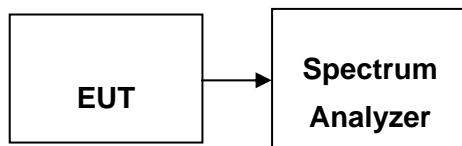
Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (W)	Limit (W)	Result
Low	2412	13.30	0.021	1	PASS
Mid	2437	12.62	0.018		PASS
High	2472	12.60	0.018		PASS

5.3 Peak Power Spectral Density

5.3.1 Limits

1. For direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission.
2. The direct sequence operating of the hybrid system, with the frequency hopping operation turned off, shall comply with the power density requirements of paragraph (d) of this section.

5.3.2 Test Configuration



5.3.3 Test procedure

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW = 3kHz, VBW = 10kHz, Span = 300kHz, Sweep=100s
4. Record the max reading.
5. Repeat the above procedure until the measurements for all frequencies are completed.

5.3.4 EUT Setup and Operating Conditions

Controlled by an embedded test program provided by applicant, the EUT was set to continuous transmitting at maximum peak output power and different data rate(802.11b 11Mbps,802.11g 54Mbps), Lowest ,middle and highest channel were measured respectively.

5.3.4 Test results

802.11b

Channel	Frequency	Peak Power Spectral Density (dBm)	Limit (dBm)	Result
Low	2412	-19.47	8.00	PASS
Mid	2437	-20.20		PASS
High	2472	-19.30		PASS

802.11g

Channel	Frequency	Peak Power Spectral Density (dBm)	Limit (dBm)	Result
Low	2412	-29.42	8.00	PASS
Mid	2437	-30.15		PASS
High	2472	-29.98		PASS

5.4 Conducted Spurious Emissions

5.4.1 Requirement

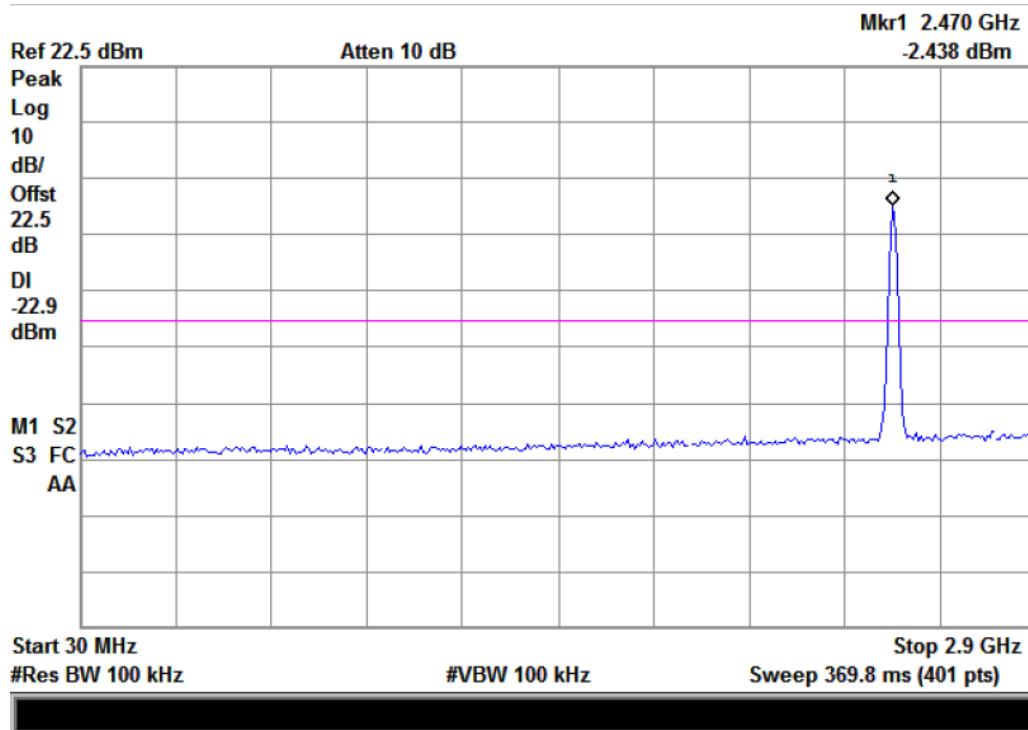
According to FCC section 15.247(c), In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c))..

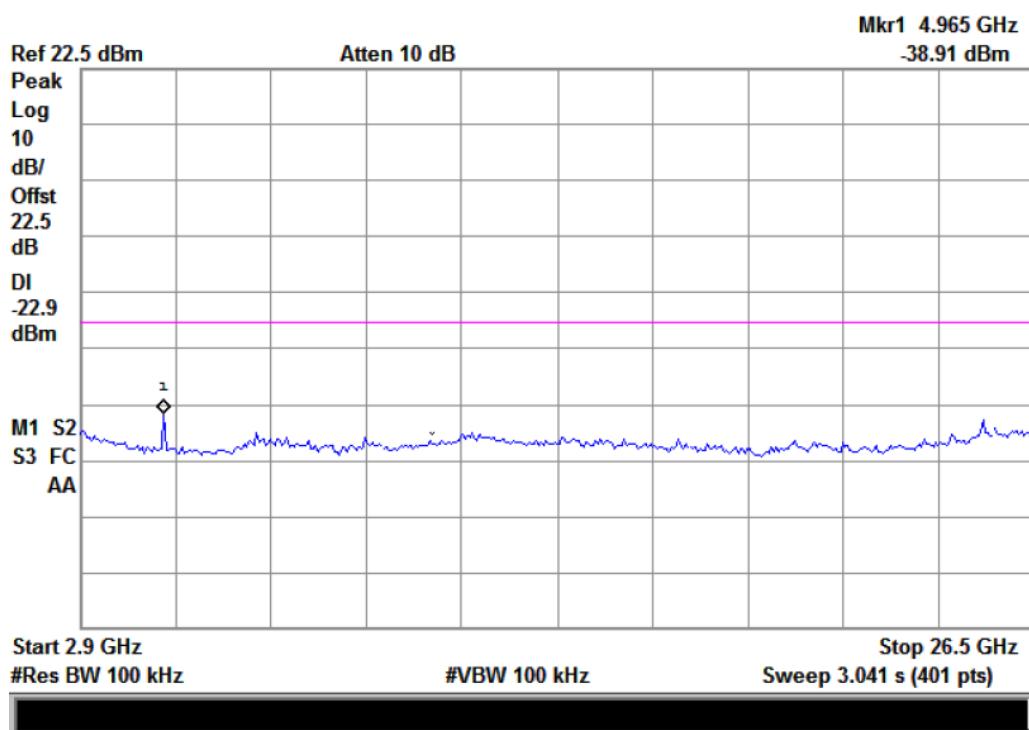
5.4.2 Test Procedure

1. Conducted RF measurements of the transmitter output were made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.
2. The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 100 KHz. The video bandwidth is set to 100 KHz.
3. Measurements are made over the 30MHz to 26.5GHz range with the transmitter set to the lowest, middle, and highest channels.

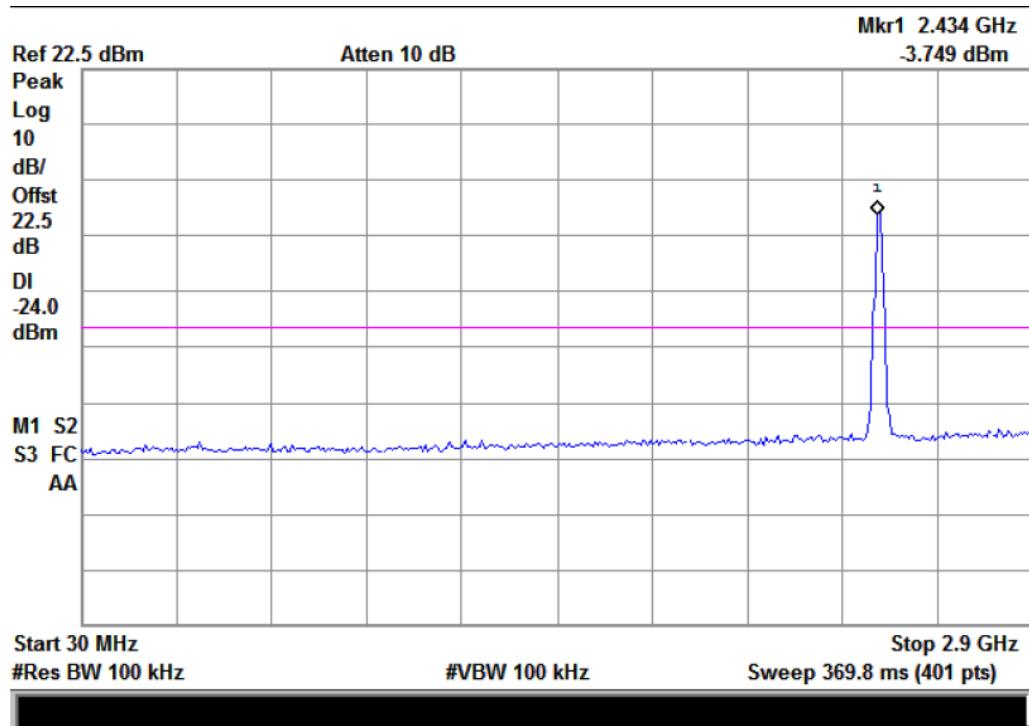
5.4.3 Test Result

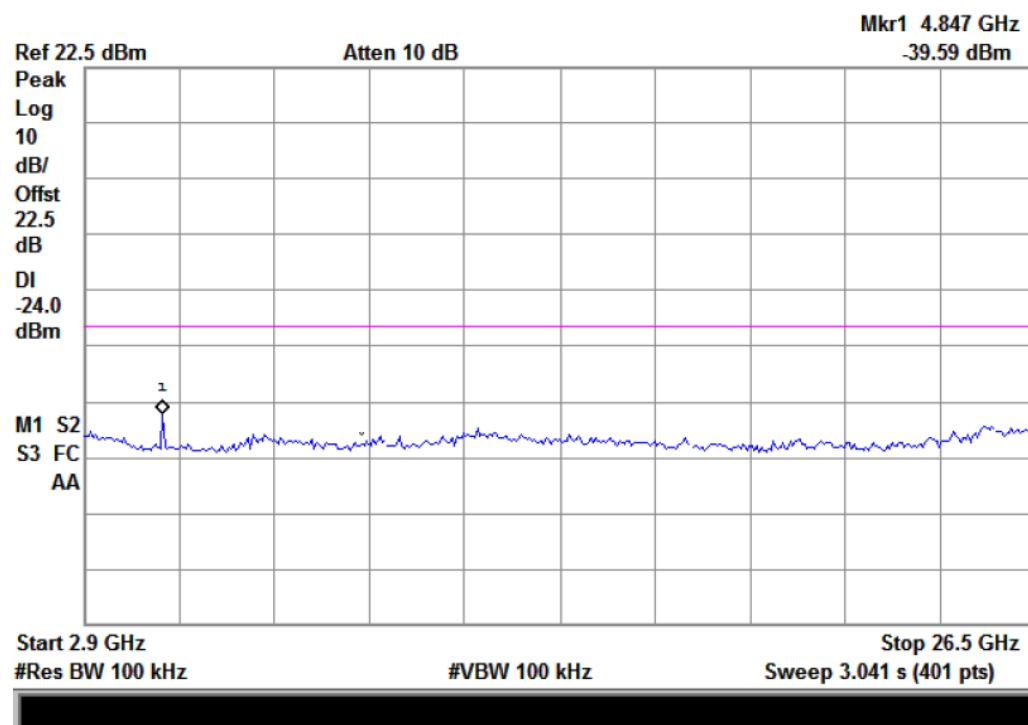
802.11b, highest channel



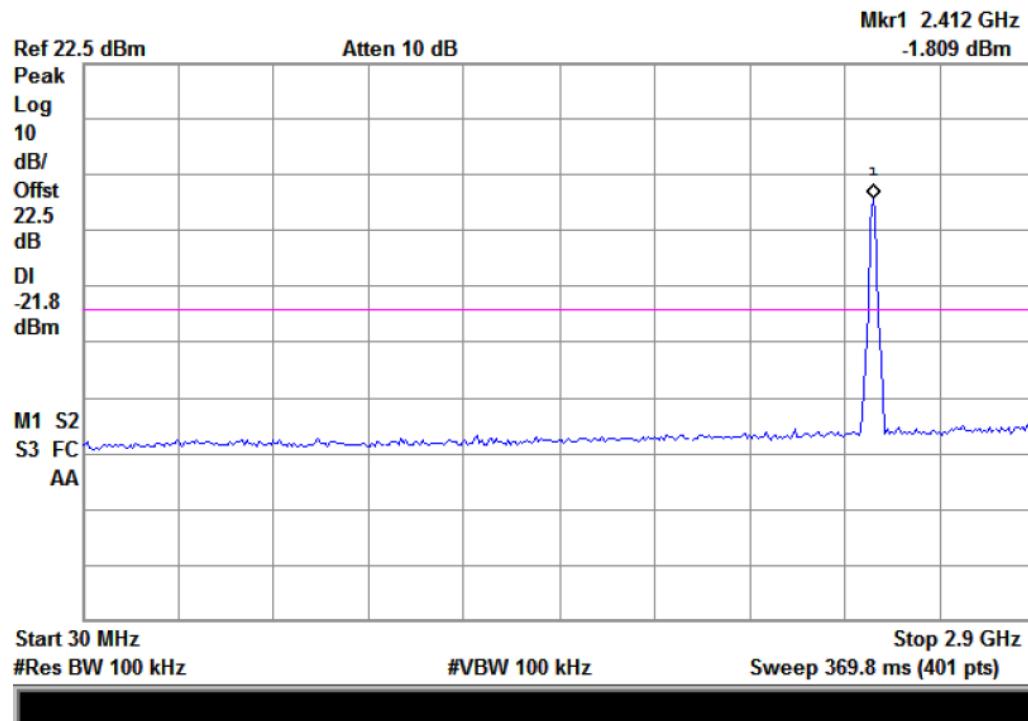


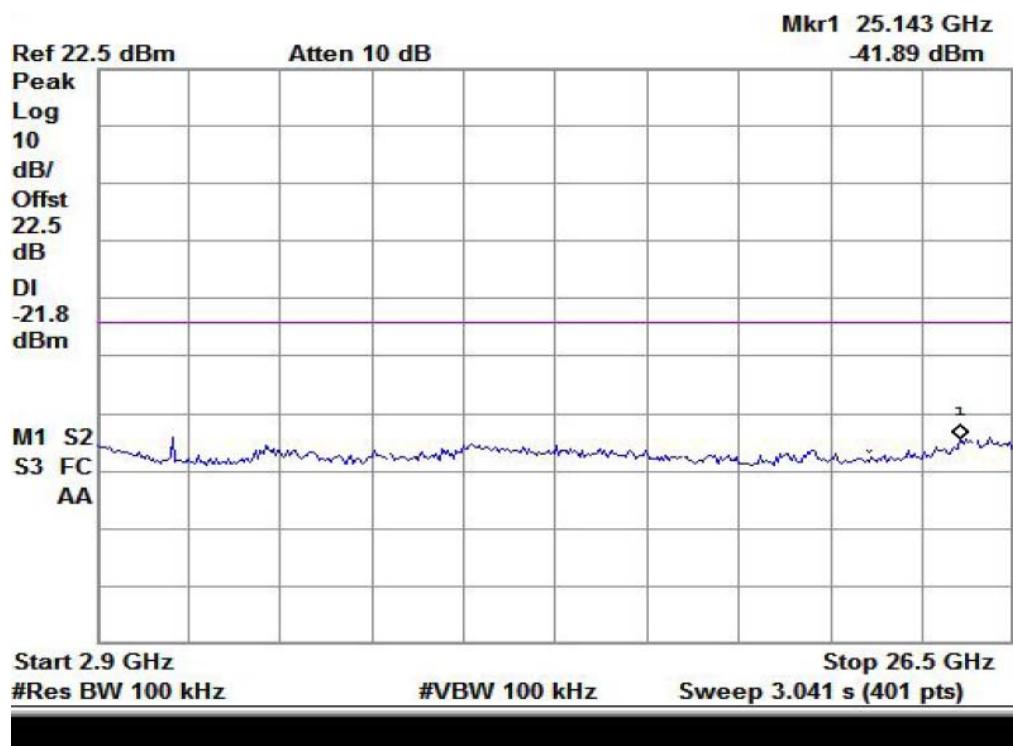
802.11b, middle channel



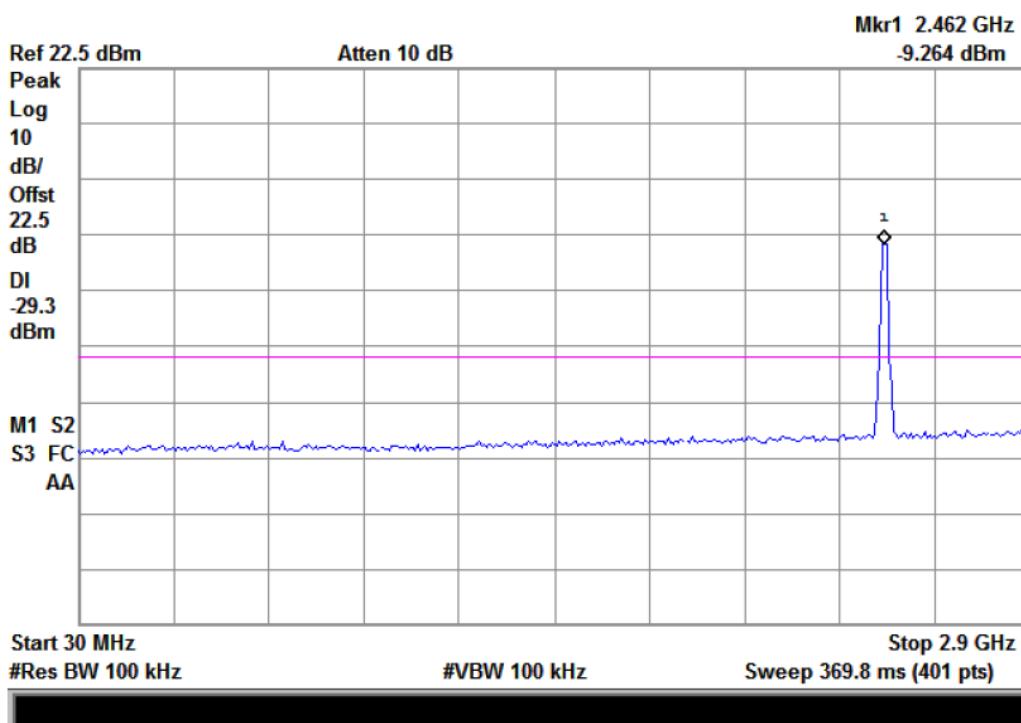


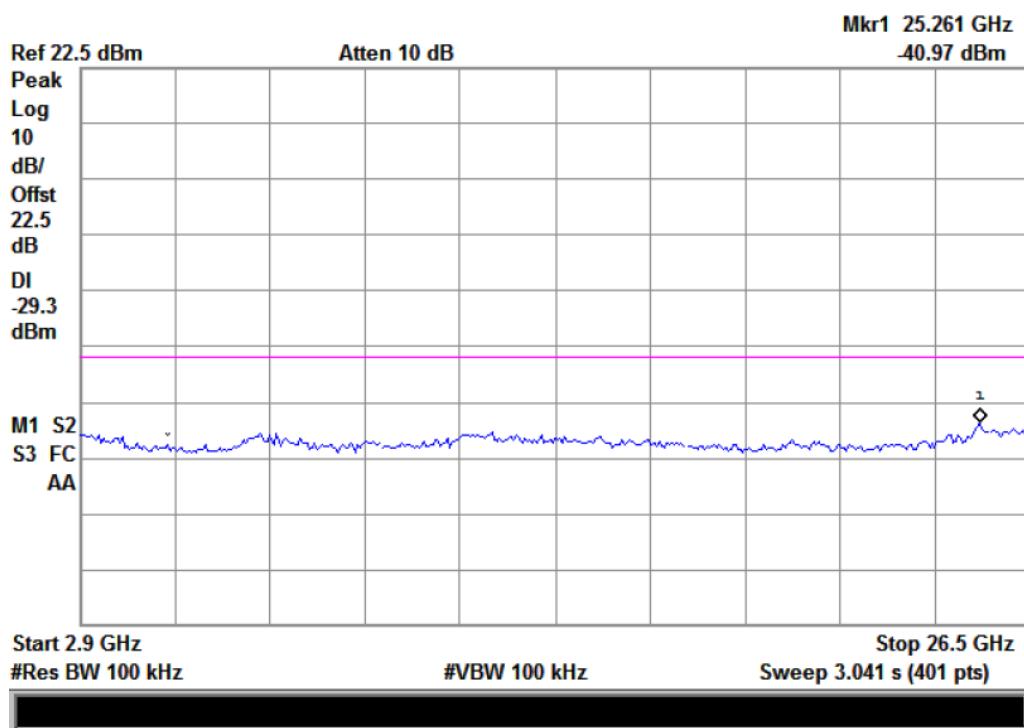
802.11b, lowest channel



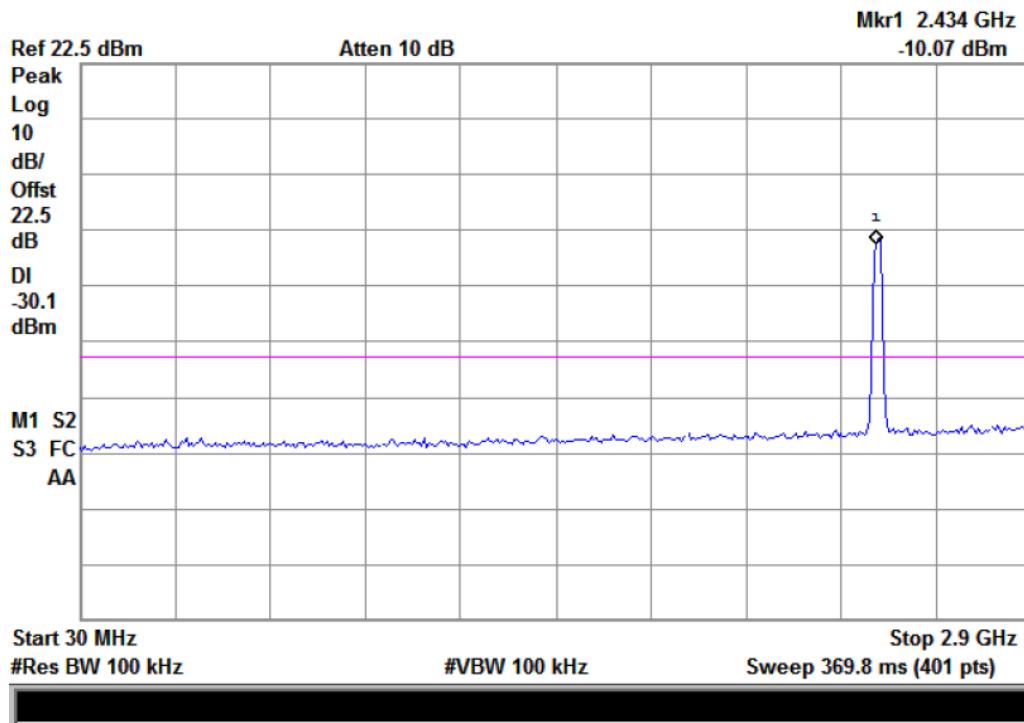


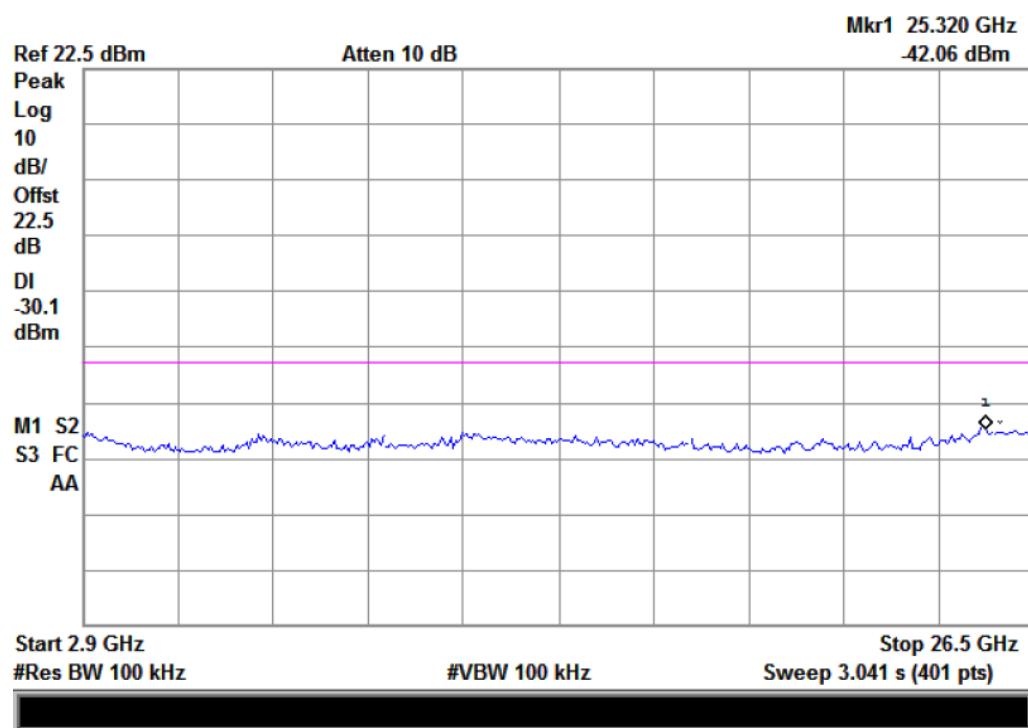
802.11g, highest channel



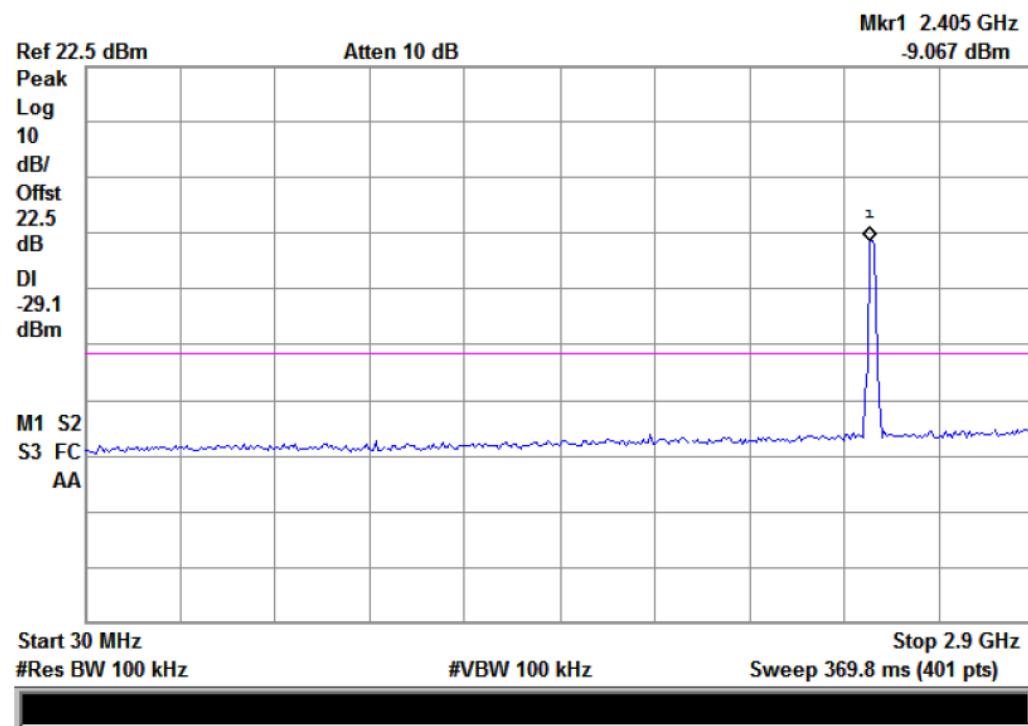


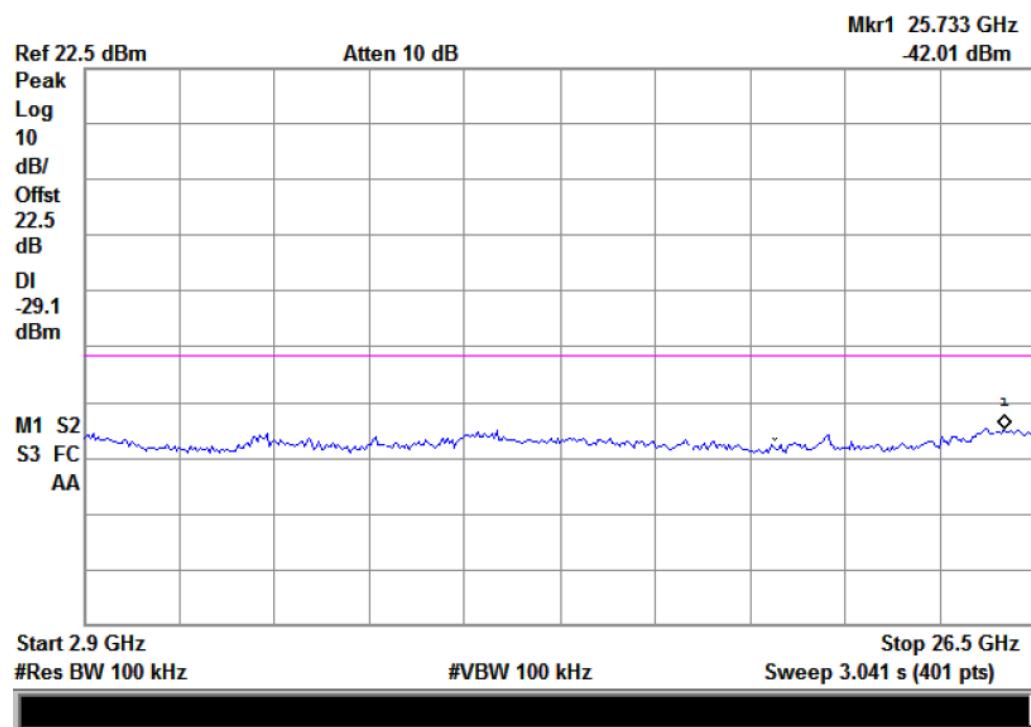
802.11g, middle channel





802.11g, lowest channel



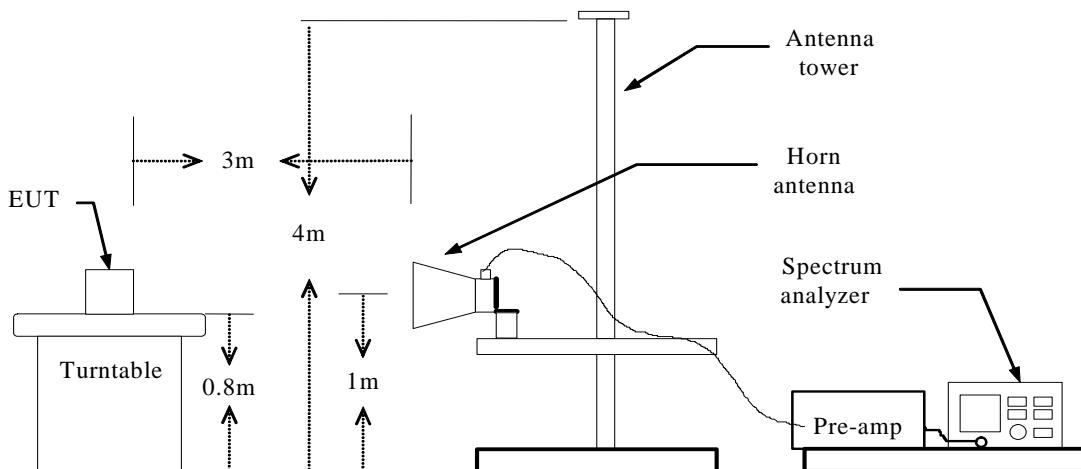


5.5 Band Edge

5.5.1 Requirement

According to FCC section 15.247(c), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a)..

5.5.2 Test Setup



5.5.3 Test Procedure

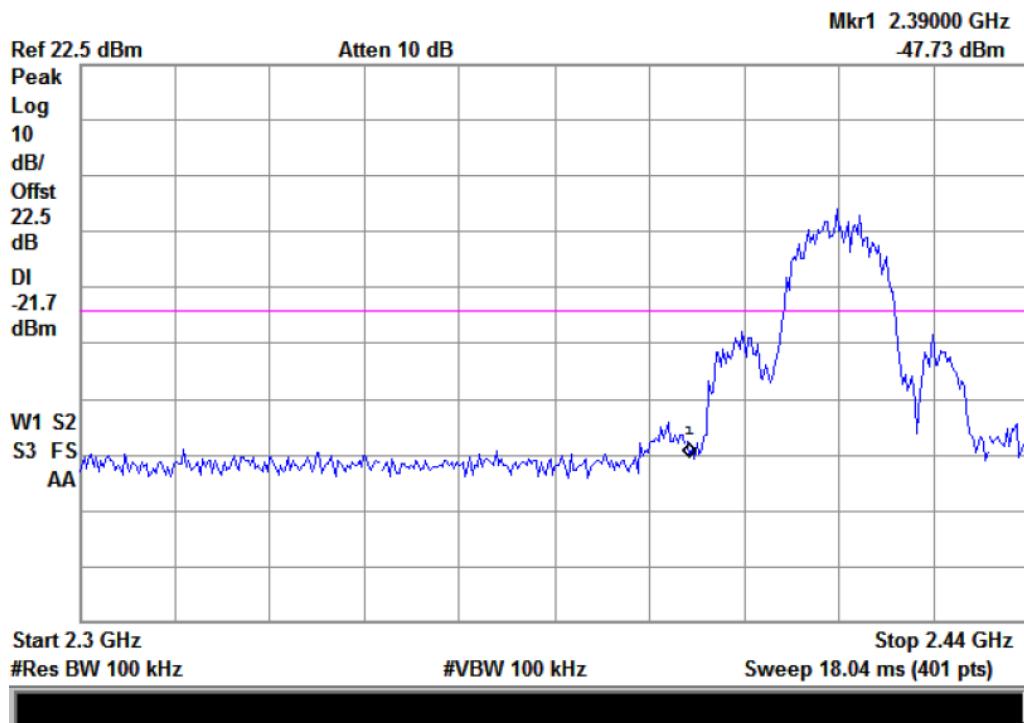
1. The EUT is placed on a turntable, which is 0.8m above the ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
 - (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
 - (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO
5. Repeat the procedures until all the PEAK and AVERAGE versus POLARIZATION are measured.

5.5.4 Test Result

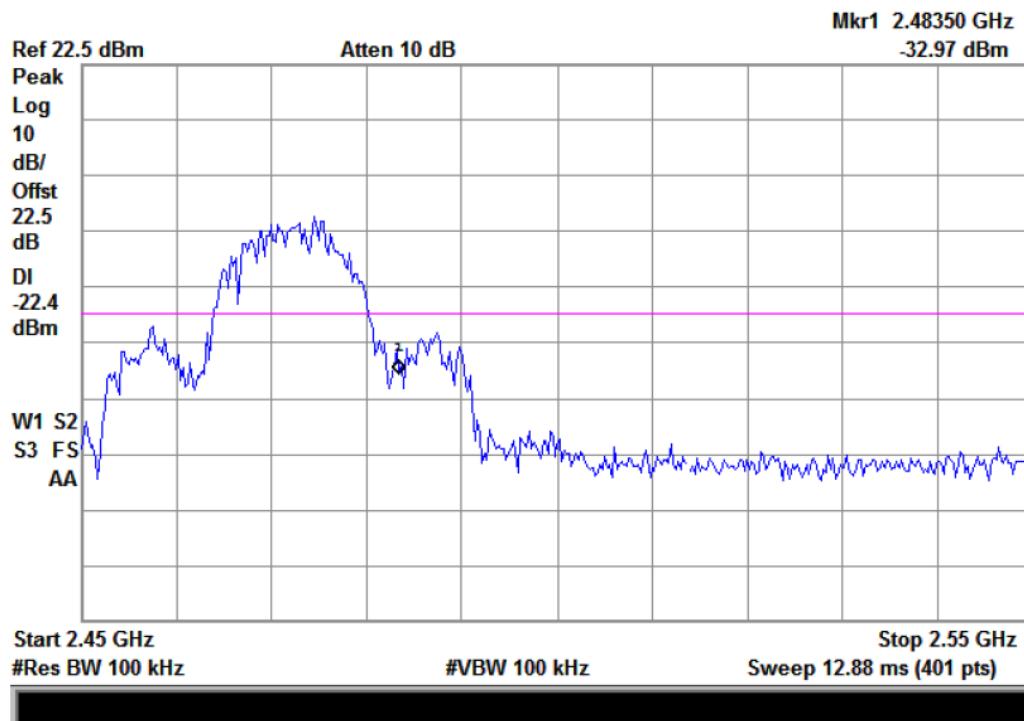
The radio frequency power beyond the band edge was 20dB below the peak output power, measured with 100 KHz resolution bandwidth.

Refer to attach spectrum analyzer data chart.

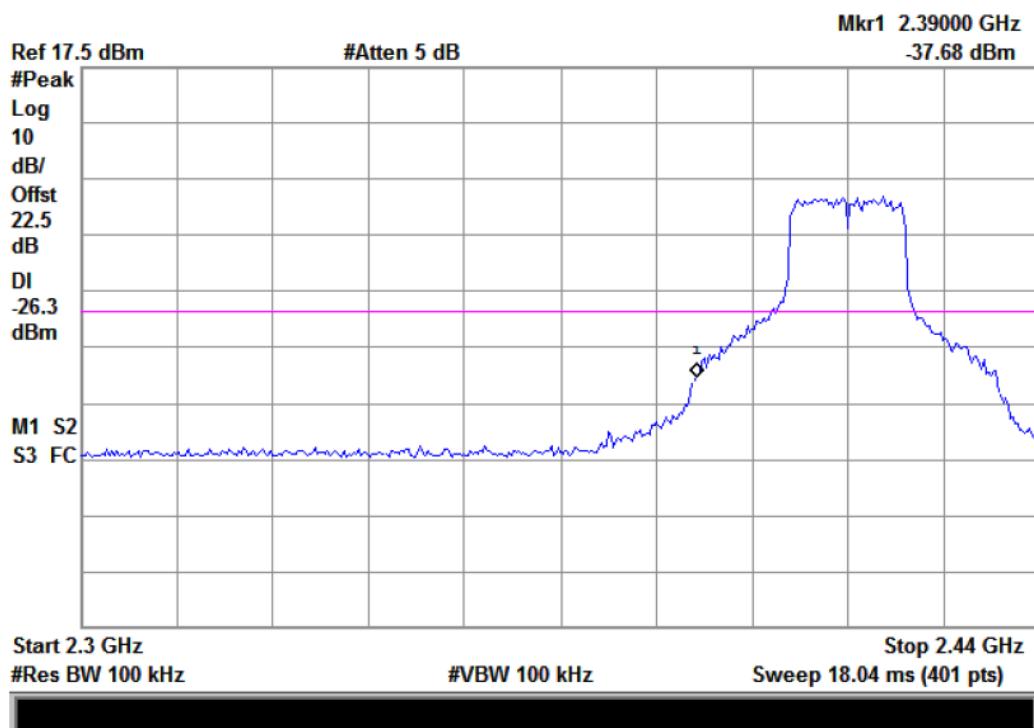
802.11b, lowest channel



802.11b, highest channel



802.11g, lowest channel



802.11g, highest channel

