

TEST REPORT

Ref. Report No.

06-1341-019-3

Name and address of the applicant

Ezze Mobile Tech., Inc.
1F, Bubmuds Bldg., 151-31, Nonhyun-dong, Kangnam-ku,
Seoul, Korea

Standard / Test regulation

FCC Part 15, Subpart C

Test result

Pass

Incoming date : Jun 14, 2006

Test date : Jun 20 ~ 23, 2006

Test item(s) ;

Dual-Band GSM/GPRS Phone with
Bluetooth

Model/type ref. ;

EZ800

Manufacturer ;

Ezze Mobile Tech., Inc.

Additional information ;

-Required Authorization : Certification

-FCC ID. : RV2EZ800

Issue date : Jun 23, 2006

This test report only responds to the tested sample and shall not be reproduced except in full without written approval of the Korea Testing Laboratory.

Tested and reported by



Sung-Kyu Cho, Engineer

Reviewed by



Won-Seo Cho, Telecommunication Team
Manager

KOREA TESTING LABORATORY

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I. GENERAL INFORMATION

1. Applicant's Name and Mailing Address : Ezze Mobile Tech., Inc.
1F, Bubmuds Bldg., 151-31, Nonhyun-dong,
Kangnam-ku, Seoul, Korea
2. Manufacturer's Name and Mailing Address : Ezze Mobile Tech., Inc.
Rm. 204, Anyang Megavalley, 799, Guanyang-dong,
Dongan-gu, Anyang-city, Gyunggi-do, Korea, 431-767
3. Equipment Descriptions
- 3.1 Operating Frequency : 2,402 ~ 2,480 MHz (Bluetooth)
3.2 FCC Classification : FCC Part 15 Frequency Hopping Spread Spectrum Transceiver (DSS)
3.3 Power Supply : DC 3.8V (Battery)
4. Rules and Regulations : FCC Part 15, Subpart C
5. Measuring Procedure : ANSI C63.4-2003
6. Place of Measurement : Absorber-lined room(3-Meter) of KTL
7. Date of Measurement
- 7.1 Conducted Emission : Jun 20 ~ 23, 2006
7.2 Radiated Emission : Jun 20 ~ 23, 2006

● The Bluetooth was tested by Korea Testing Laboratory and We confirm the following:

1. The Hopping sequence is pseudorandom
2. All Channels were used equally on average
3. The receiver input bandwidth equals the transmit bandwidth
4. The receiver hops in sequence with the transmit signal
5. 15.247(g) In accordance with the Bluetooth Industry Standard, the system is designed to comply with all of the regulations in Section 15.247 when the transmitter is presented with a continuous data (or information) stream.
6. 15.247(h) In accordance with the Bluetooth Industry Standard, the system does not coordinate its channel selection/hopping sequence with other frequency hopping systems for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters.

II. GENERAL REQUIREMENTS OF THE EUT

1. Labelling Requirement (Section 15.19 and Section 15.214)

This device complies with Part 15 of the FCC Rules.
Operation is subject to following two condition : (1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Privacy of communication may not be ensured when using this phone.

1.1 Location of Label : User's Guide Manual

1.2 How Applied : Printed

2. Information to User (Section 15.21)

The following or similar statements were provided in the manual for user instruction.

Please refer page 77 of the attached manual for details.

CAUTION : Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

3. Special Accessories (Section 15.27)

3.1 Were the special Accessories provided? [] yes, [☒] no

3.2 If yes, details for the special accessories are as follows :

3.3 If yes, were the appropriate instructions provided on the first page of the text concerned with the device?

[] yes, [] no

3.4 Are these accessories provided of the type which can be readily obtained from multiple retail outlets ?

[] yes, [] no

And therefore does the manual specify what additional components or accessories are required to used in order to comply with the Rules?

[] yes, [] no

III. CONDUCTED EMISSION MEASUREMENT (Section 15.207)

1. Test Procedure

The EUT is designed to transmit on one of 79 channels in the band 2402 to 2480 MHz. Therefore measurements were performed with the equipment operating on three frequencies, which were the top(CH 78), middle(CH 39), and bottom(CH 0) in the band, as per Section 15.31(m). Test mode was transmitting mode and charging mode.

Conducted emission measurements on the EUT were performed by "AC Power Line Conducted Emissions Testing" procedure as per ANSI C63.4. The EUT was set up on a wooden table 0.8 meters height, 1.0 by 1.5 meters in size, placed in the shielded enclosed with a side of wall of which constituted a vertical conducting surface of 2.2 m X 3.1 m in size to maintain 40 cm from the rear of EUT

LISN (Line Impedance Stabilization Network, R & S, ESH3-Z5, 50 ohm/50 uH) was installed and electrically bonded to the conducting ground plane. The EUT was connected to the LISN.

The frequency range from 150 kHz to 30 MHz was examined and the peak values that are within 6 dB of the limit would be compared to quasi-peak values using the Quasi-Peak mode and average value using the average mode.

The position of connecting cables of the EUT was changed to find the worst case configuration during measurements. The maximum emission level from the EUT occurred in such configuration as shown in the following photograph.

2. Photograph for the test configuration



3. Sample Calculation

The emission level measured in decibels was shown in following sample calculation.

For example :

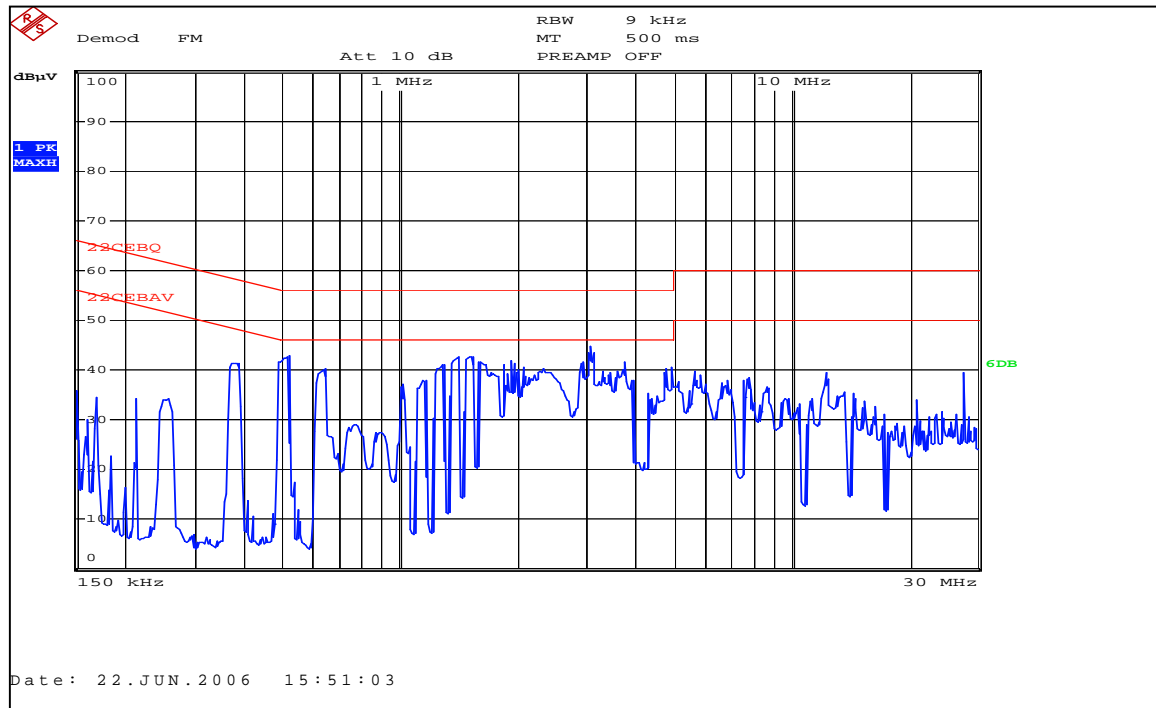
Measured Value at	<u>1.41 MHz</u>	21.3 dB μV	@ Average mode
+	Cable Loss *	0.0 dB	
<hr/>			
=	Conducted Emission	21.3 dB μV	

* In case of RG214/ RF cable 15Ft, the loss is about 0.17dB at the frequency of 30 MHz which is negligible.

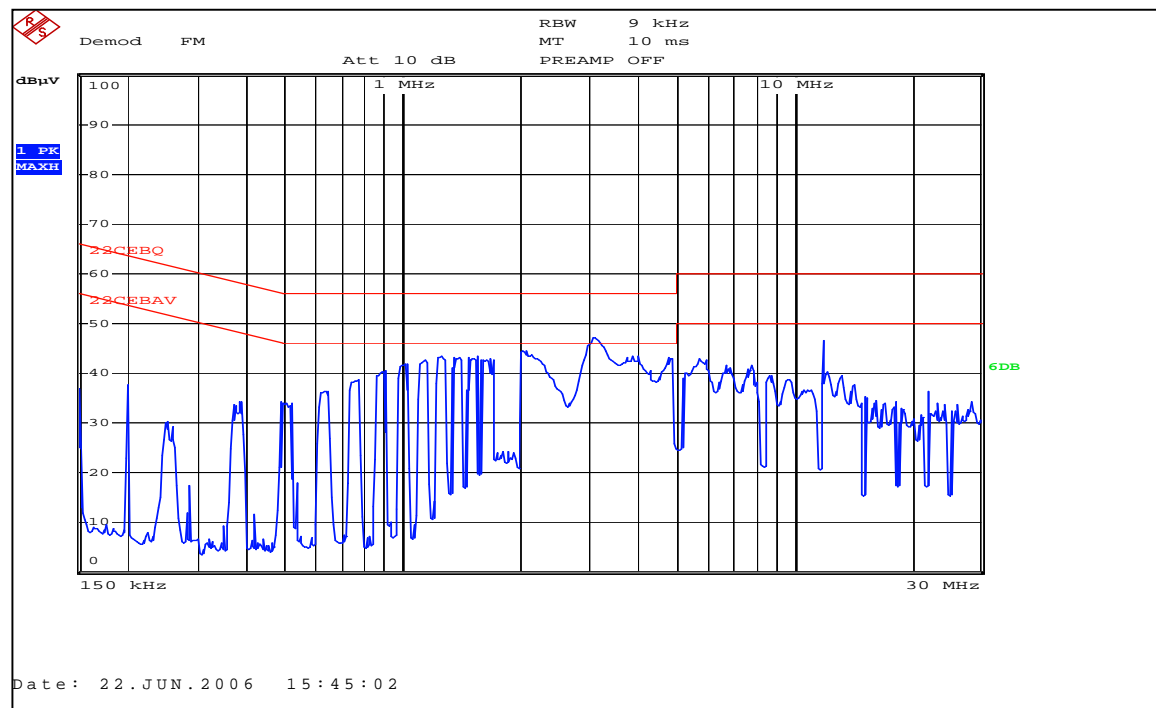
4. Measurement Data

- Operating Frequency : 2441.00 MHz (CH 39)
- Operating mode : Transmitting mode
- Resolution Bandwidth : x CISPR Quasi-Peak (6dB Bandwidth : 9 kHz)
x Average (6dB Bandwidth : 9 kHz)

Power Lead Tested	Frequency (MHz)	Emission Level		Limit		(*) Margin	
		Q-Peak (dB μ V)	Average (dB μ V)	Q-Peak (dB μ V)	Average (dB μ V)	Q-Peak (dB μ V)	Average (dB μ V)
Live to Ground	0.38	40.0	32.8	58.3	48.3	18.3	15.5
	0.52	40.8	25.6	56.0	46.0	15.2	20.4
	0.65	38.5	23.5	56.0	46.0	17.5	22.5
	1.41	39.3	21.3	56.0	46.0	16.7	24.7
	3.08	34.5	18.6	56.0	46.0	21.5	27.4
	3.75	34.1	15.5	56.0	46.0	21.9	30.5
Neutral to Ground	1.26	40.2	20.0	56.0	46.0	15.8	26.0
	1.55	39.8	13.6	56.0	46.0	16.2	32.4
	2.06	40.1	18.7	56.0	46.0	15.9	27.3
	3.11	44.4	24.9	56.0	46.0	11.6	21.1
	4.85	38.0	20.3	56.0	46.0	18.0	25.7
	11.92	32.6	17.1	60.0	50.0	27.4	32.9
<p>Note : Refer to measured graphs on next page.</p> <p>* Margin(dB) : Emission Level (dB) - Limit (dB)</p>							



(Test side : Live-Ground side)



(Test side : Neutral-Ground side)

IV. RADIATED EMISSION MEASUREMENT (Section 15.247(d))

1. Test Procedure

1.1 Preliminary Testing for Reference

The EUT is designed to transmit on one of 79 channels in the band 2,402 to 2,480. Therefore measurements were performed with the equipment operating on three frequencies, which were the top(CH 79), middle(CH 39), and bottom(CH 0) in the band, as per Section 15.31(m).

Preliminary testing was performed in a KTL absorber-lined room to determine the emission characteristics of the EUT. The EUT was placed on the wooden table which has dimensions of 0.8 meters in height, 1 meter in length and 1.5 meters in width. Receiving antenna (Biconi-Log antenna : 30 to 1000 MHz or Horn Antenna : 1 to 25 GHz) was placed at the distance of 1 meter from the EUT.

An attempt was made to maximize the emission level with the various configurations of the EUT. Emission levels from the EUT with various configurations were examined on a spectrum analyzer connected with a RF amplifier and graphed by a plotter.

– Final Radiated Emission Test at an Absorber-Lined Room

The final measurement of radiated field strength was carried out in a KTL absorber-lined Room that was listed up at FCC according to the “Radiated Emissions Testing” procedure specified by ANSI C63.4.

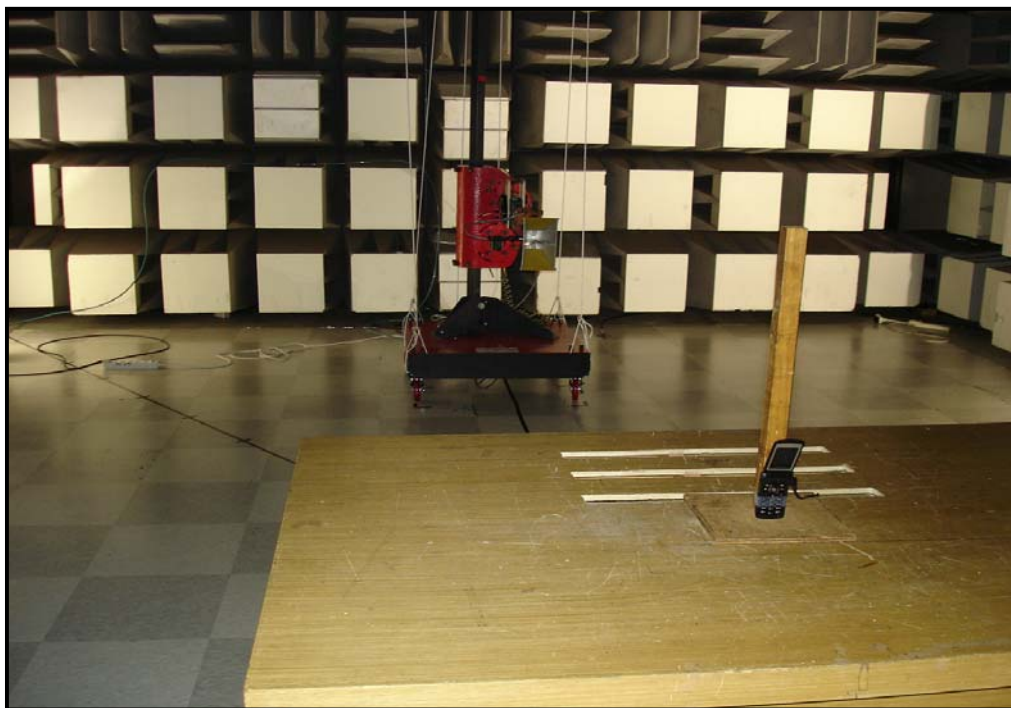
Based on the test results in preliminary test, measurement was made in same test set up and configuration with 3 orthogonal planes where produced maximum emission level. Receiving antenna was installed at 3-meter distance from the EUT, and was connected to an EMI receiver or spectrum analyzer with a RF amplifier.

Turntable was rotated through 360 degrees and receiving antenna height was varied from 1 to 4 meters above the ground plane with horizontal and vertical polarization to read maximum emission level.

If necessary, the radiated emission measurements could be performed at a closer distance than specified distance to ensure higher accuracy and their results were extrapolated to the specified distance using an inverse linear distance extrapolation factor(20dB/decade) as per Section 15.31(f).

The maximum emission level from the EUT occurred in such configuration as shown in the following photograph.

- Photograph of the test configuration



- Sample Calculation

The emission level measured in decibels above one microvolt ($\text{dB } \mu\text{V}$) was calculated as shown in following sample calculation.

For example :

Measured Value at	<u>4,804 MHz</u>	35.5 dB μV
+ Antenna Factor, Cable Loss		37.6 dB/m
– Preamplifier		-35.0 dB
– Distance Correction Factor *		0.0 dB
<hr/>		
= Radiated Emission		38.1 dB $\mu\text{V}/\text{m}$

* Extrapolated from the measured distance to the specified distance by an inverse linear distance extrapolation.

4. Measurement Data

4.1 Operating Frequency (Bottom : 2402 MHz , CH.0)

- Resolution Bandwidth : x CISPR Quasi-Peak (6dB Bandwidth : 120kHz for below 1GHz)
 x Peak (3dB Bandwidth : 1MHz for above 1GHz)
- Measurement Distance : 3 Meter

Frequency (MHz)	* D.M.	* A.P.	Measured Value (dB μ V)	* A.F. + C.L. (dB)	* A.G. (dB)	* D.C.F. (dB)	Emission Level		Limit (μ V/m)	** Margin (dB)
							(dB μ V/m)	(μ V/m)		
4,804	P	H	35.5	37.6	-35.0	--	38.1	80.4	500	- 15.9
*** 7,206	P	H/V	<35.0	42.1	-35.0	-9.5	<32.6	<42.7	500	<- 21.4
--	--	--	--	--	--	--	--	--	--	--

Note

* D.M. : Detect Mode (P : Peak, Q : Quasi-Peak, A : Average)
A.P. : Antenna Polarization (H : Horizontal, V : Vertical)
A.F. : Antenna Factor
C.L. : Cable Loss
A.G. : Amplifier Gain
D.C.F. : Distance Correction Factor

** Margin (dB) = Emission Level (dB) – Limit (dB)

*** In the case of these frequencies, the EUT was measured at 1.0m distance for sufficient sensitivity of measurement system.

**** < means less than. The observed spectrum analyzer noise floor level with RF preamplifier was 35.0 dB μ V

Average detector mode was not measured because the peak emission values were under the average limits.

4.2 Operating Frequency (Middle : 2441 MHz , CH.39)

- Resolution Bandwidth : x CISPR Quasi-Peak (6dB Bandwidth : 120kHz for below 1GHz)
 x Peak (3dB Bandwidth : 1MHz for above 1GHz)
- Measurement Distance : 3 Meter

Frequency (MHz)	* D.M.	* A.P.	Measured Value (dB μ V)	* A.F. + C.L. (dB)	* A.G. (dB)	* D.C.F. (dB)	Emission Level		Limit (μ V/m)	** Margin (dB)
							(dB μ V/m)	(μ V/m)		
4,882	P	H	34.8	37.6	-35.0	--	37.4	74.1	500	- 16.6
*** 7,323	P	H/V	<35.0	42.1	-35.0	-9.5	<32.6	<42.7	500	<- 21.4
--	--	--	--	--	--	--	--	--	--	--

Note

* D.M. : Detect Mode (P : Peak, Q : Quasi-Peak, A : Average)
A.P. : Antenna Polarization (H : Horizontal, V : Vertical)
A.F. : Antenna Factor
C.L. : Cable Loss
A.G. : Amplifier Gain
D.C.F. : Distance Correction Factor

** Margin (dB) = Emission Level (dB) – Limit (dB)

*** In the case of these frequencies, the EUT was measured at 1.0m distance for sufficient sensitivity of measurement system.

**** < means less than. The observed spectrum analyzer noise floor level with RF preamplifier was 35.0 dB μ V

Average detector mode was not measured because the peak emission values were under the average limits.

4.3 Operating Frequency (Top : 2480 MHz , CH.78)

- Resolution Bandwidth : x CISPR Quasi-Peak (6dB Bandwidth : 120kHz for below 1GHz)
 x Peak (3dB Bandwidth : 1MHz for above 1GHz)
- Measurement Distance : 3 Meter

Frequency (MHz)	* D.M.	* A.P.	Measured Value (dB μ V)	* A.F. + C.L. (dB)	* A.G. (dB)	* D.C.F. (dB)	Emission Level		Limit (μ V/m)	** Margin (dB)
							(dB μ V/m)	(μ V/m)		
4,960	P	H	36.8	37.6	-35.0	--	39.4	93.3	500	- 14.6
*** 7,440	P	H/V	<35.0	42.1	-35.0	-9.5	<32.6	<42.7	500	<- 21.4
--	--	--	--	--	--	--	--	--	--	--

Note

* D.M. : Detect Mode (P : Peak, Q : Quasi-Peak, A : Average)
A.P. : Antenna Polarization (H : Horizontal, V : Vertical)
A.F. : Antenna Factor
C.L. : Cable Loss
A.G. : Amplifier Gain
D.C.F. : Distance Correction Factor

** Margin (dB) = Emission Level (dB) – Limit (dB)

*** In the case of these frequencies, the EUT was measured at 1.0m distance for sufficient sensitivity of measurement system.

**** < means less than. The observed spectrum analyzer noise floor level with RF preamplifier was 35.0 dB μ V

Average detector mode was not measured because the peak emission values were under the average limits.

Note ;

- (1) Fundamental emissions from the intentional radiators were not located within any of frequency bands described in section 15.205(a) listed below ;

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.25
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.1775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2655-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	
13.36-13.41			

The field strength of emissions appearing within above frequency bands did not exceed the limits shown in section 15.209. At frequency equal to or less than 1000 MHz, compliance with the limits section 15.209 was demonstrated using measurement employing a CISPR quasi-peak detector. Above 1000 MHz, demonstrated based on the average value of the measured emissions.

- (2) If the intentional radiator was operated under the radiated emission limits of the general requirements of section 15.209, it's fundamental emissions were not located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz, 470-860 MHz.
- (3) The level of any unwanted emissions from an intentional radiator did not exceed the level of the fundamental emission.
- (4) Radiated and spurious emissions were checked from 30 MHz to 25 GHz. And all other emissions not reported on data were more than 30 dB below the permitted level.

V. OUTPUT POWER MEASUREMENT (Section 15.247(b))

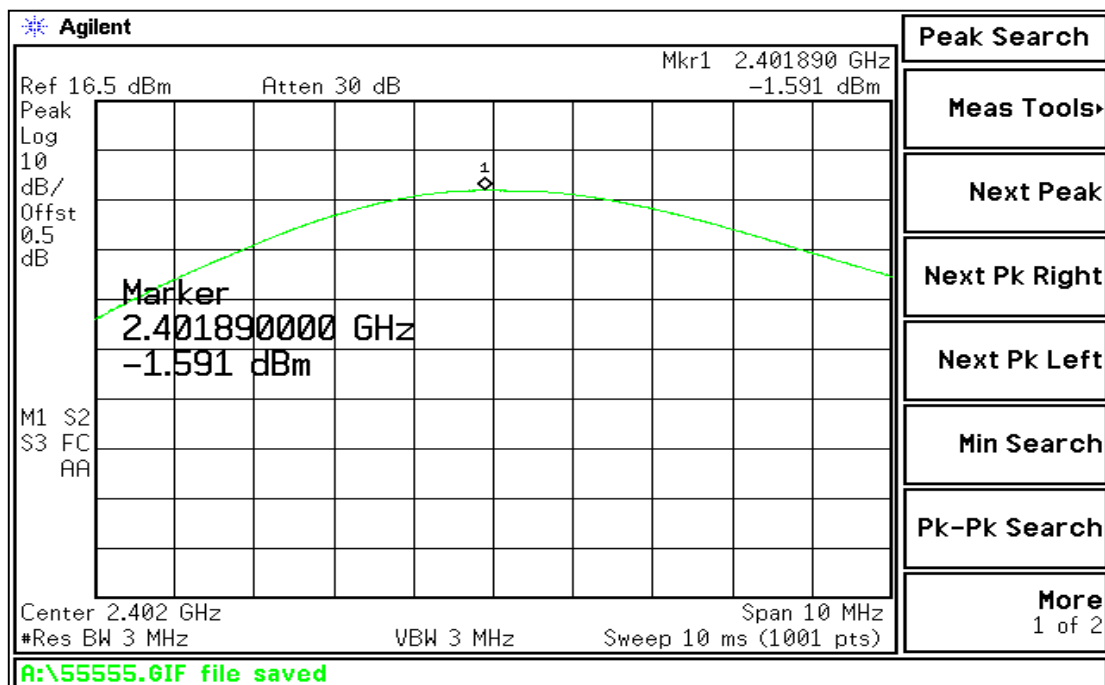
1. Test Procedure

The measurements were performed with the equipment operating on three frequencies, which were the top(CH 78), middle(CH 39), and bottom(CH 0) in the band, as per Section 15.31(m) while the EUT was operating in non-hopping transmission mode. The EUT was connected to a spectrum analyzer through a 50 ohm RF cable. The RBW(= 3 MHz) was set to greater than the 20 dB bandwidth of the emission was measured.

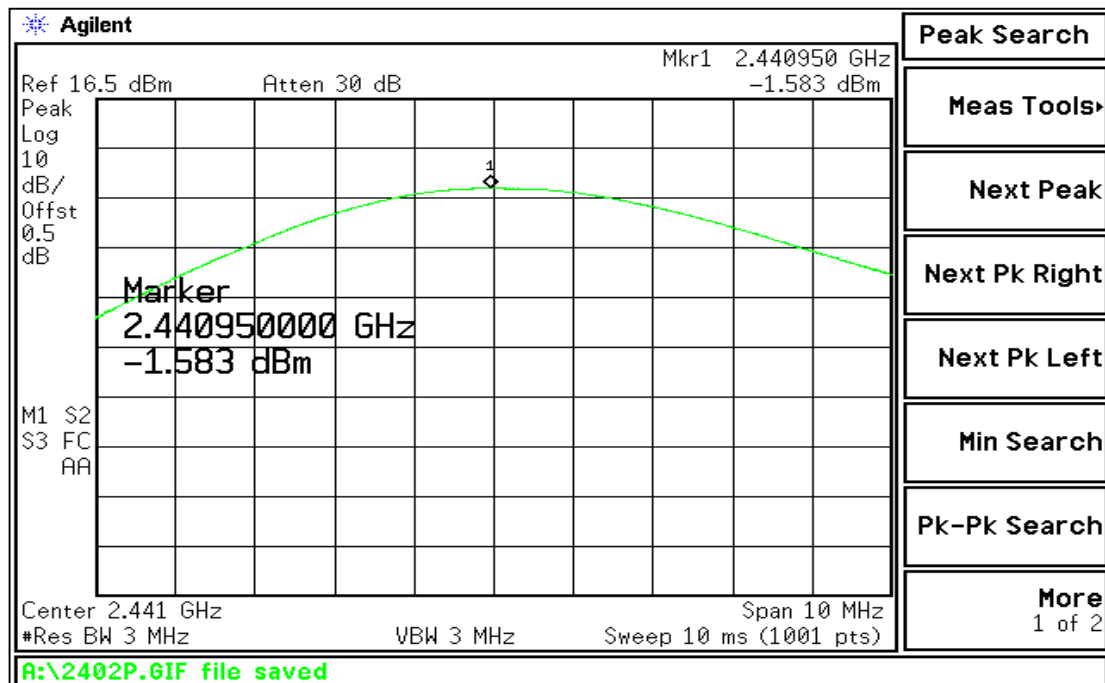
2. Test Result

Frequency (MHz)	Channel No.	Power Output (dBm)	Limit (dBm)	Result
2,402	0	- 1.59	30	Pass
2,441	39	- 1.58	30	Pass
2,480	78	- 0.51	30	Pass

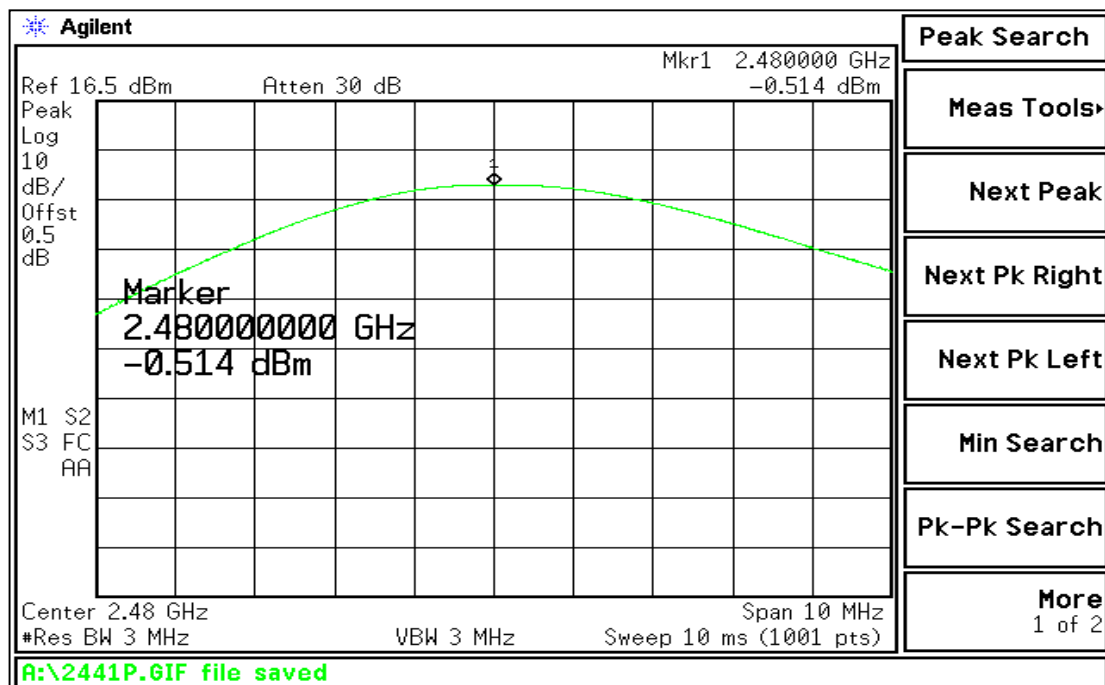
3. Test Plots



– Operating frequency : 2,402 MHz (Bottom channel) –



– Operating frequency : 2,441 MHz (Middle channel) –



– Operating frequency : 2,480 MHz (Top channel) –

VI. CONDUCTED SPURIOUS MEASUREMENT (Section 15.247(d))

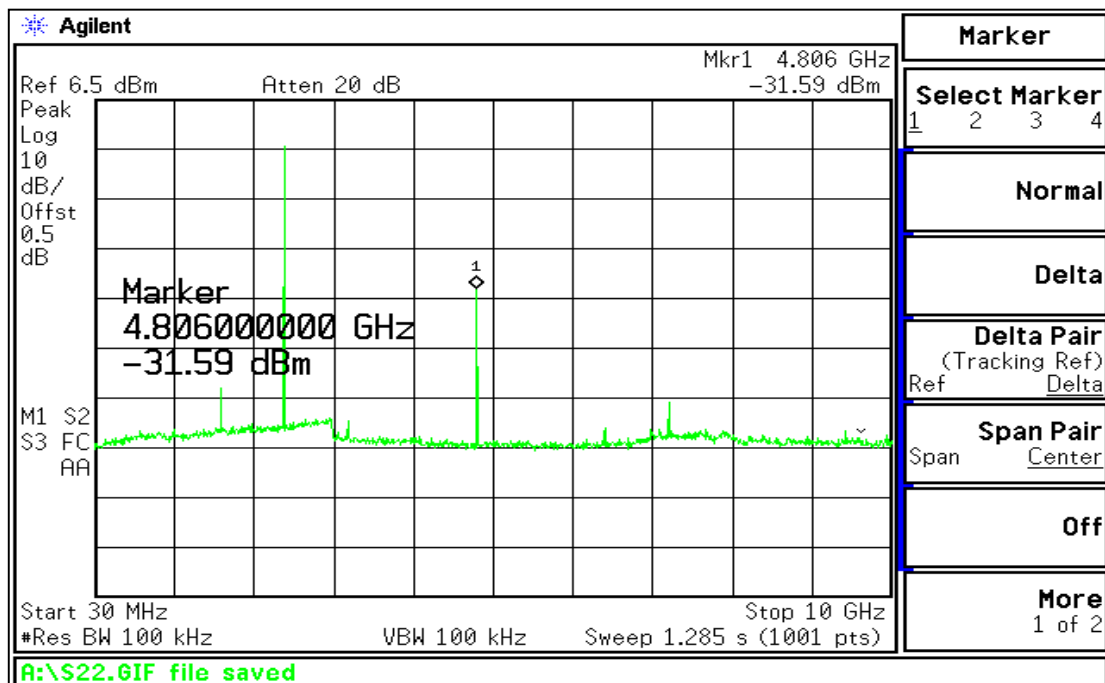
1. Test Procedure

The measurements were performed with the equipment operating on three frequencies, which were the top(CH 78), middle(CH 39), and bottom(CH 0) in the band, as per Section 15.31(m) while the EUT was operating in non-hopping transmission mode. The EUT was connected to a spectrum analyzer through a 50 ohm RF cable. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

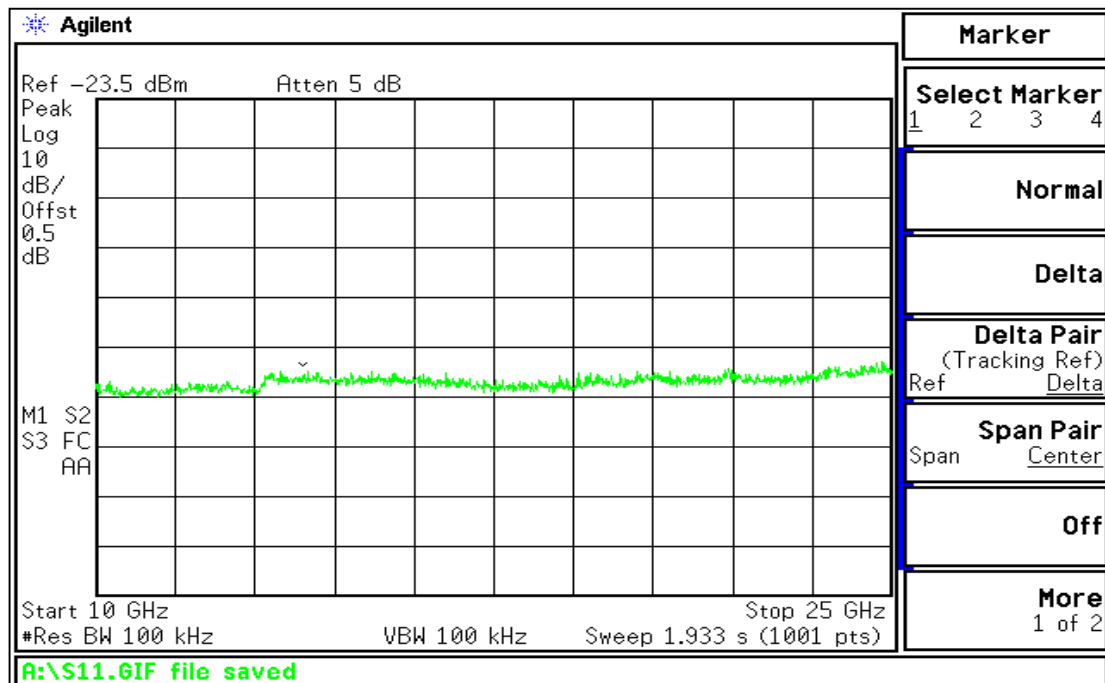
– Test Result

Frequency (MHz)	Channel No.	dBc	Limit (dBc)	Margin	Result
2,402	0	30.0	20	- 10.0	Pass
2,441	39	29.7	20	- 9.7	Pass
2,480	78	28.0	20	- 8.0	Pass

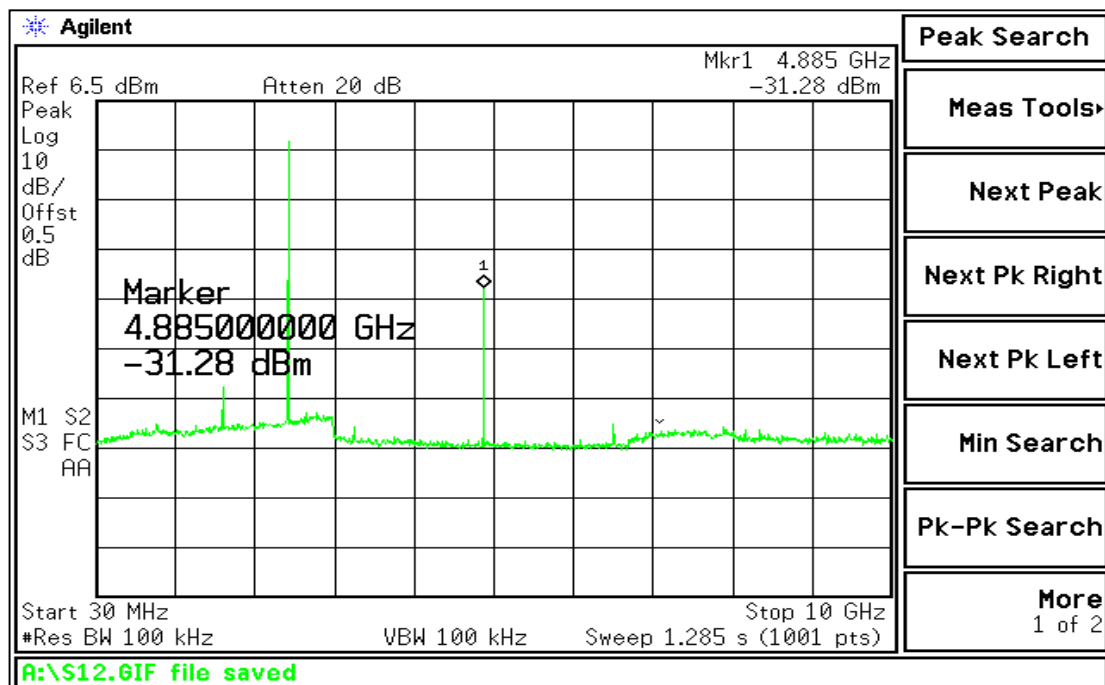
3. Test Plots



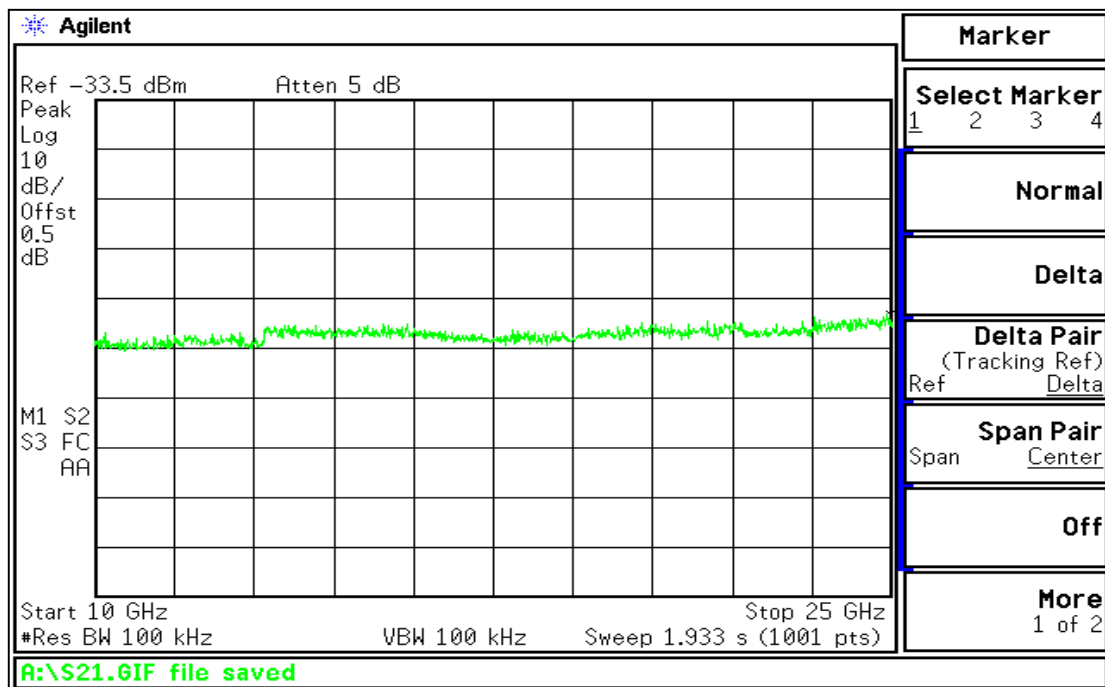
– Operating frequency : 2,402 MHz (Bottom channel) –



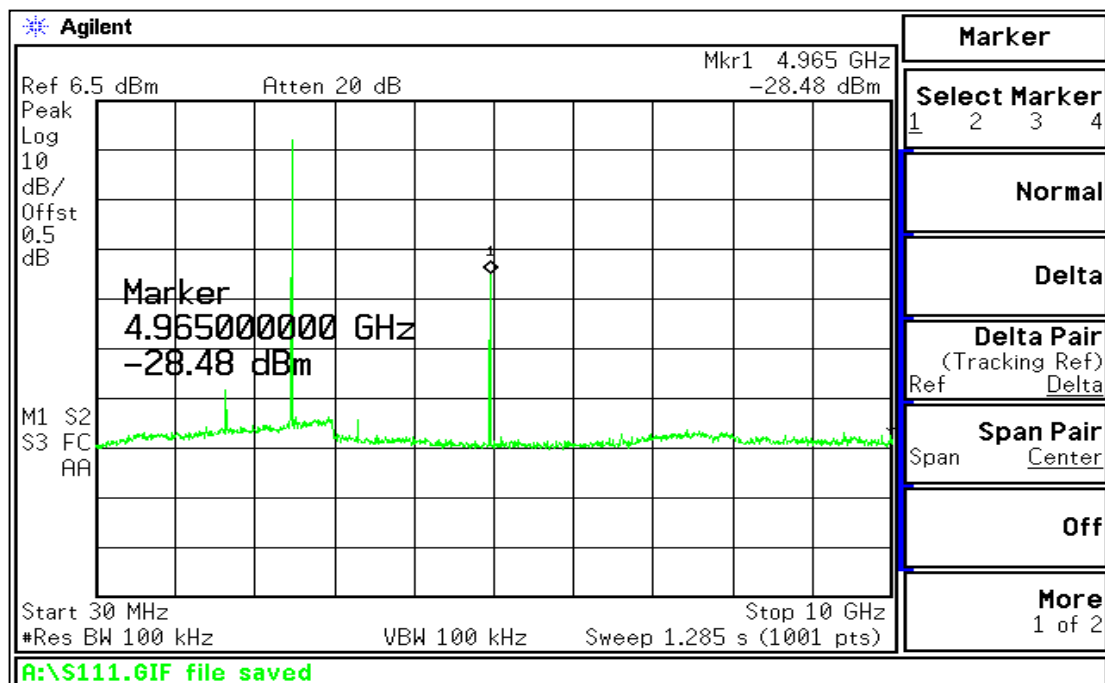
– Operating frequency : 2,402 MHz (Bottom channel) –



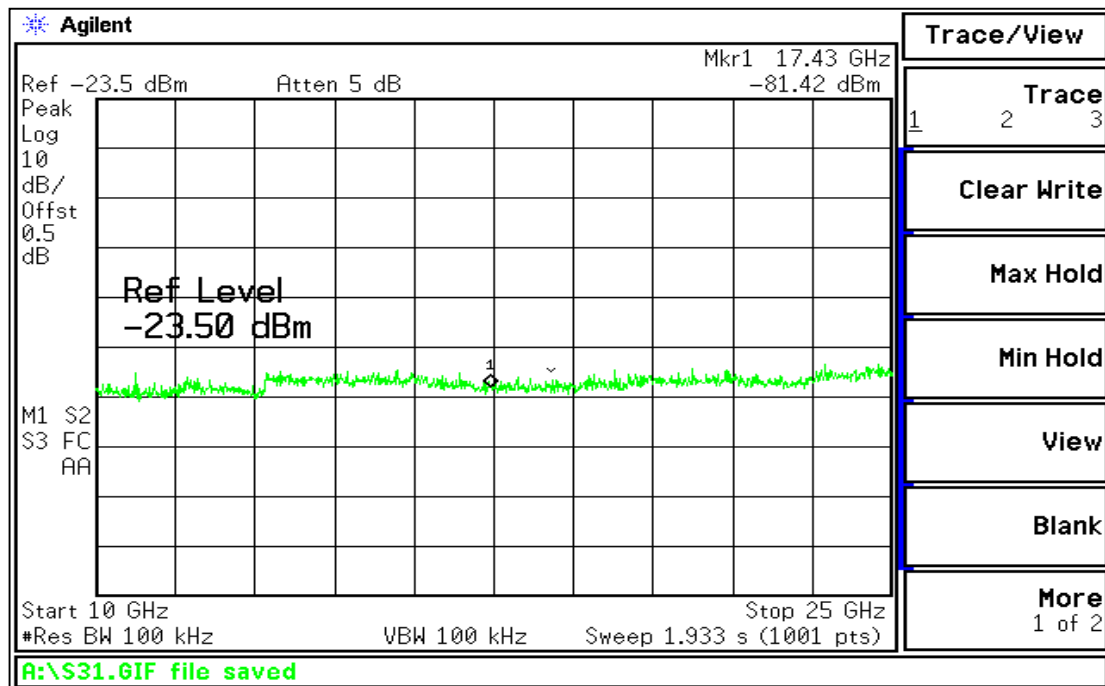
– Operating frequency : 2,441 MHz (Middle channel) –



- Operating frequency : 2,441 MHz (Middle channel) -



- Operating frequency : 2,480 MHz (Top channel) -



– Operating frequency : 2,480 MHz (Top channel) –

VII. BAND EDGE COMPLIANCE (Section 15.247(d))

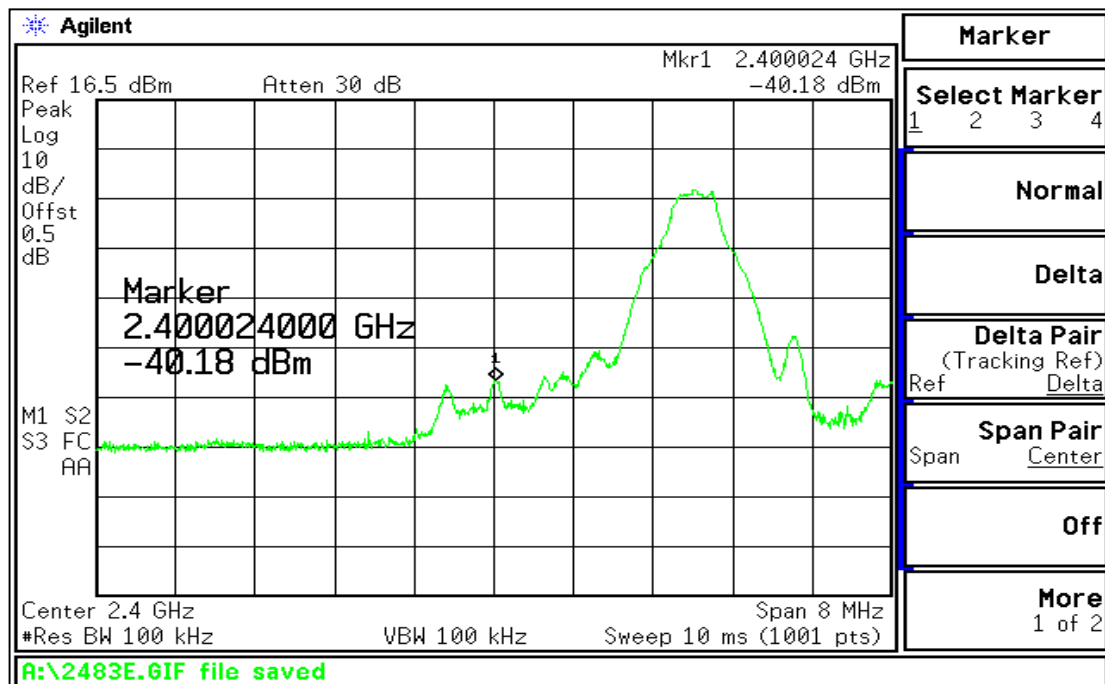
1. Test Procedure

The measurements were performed with the equipment operating on three frequencies, which were the top(CH 78), middle(CH 39), and bottom(CH 0) in the band, as per Section 15.31(m) while the EUT was operating in non-hopping transmission mode. The EUT was connected to a spectrum analyzer through a 50 ohm RF cable. In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

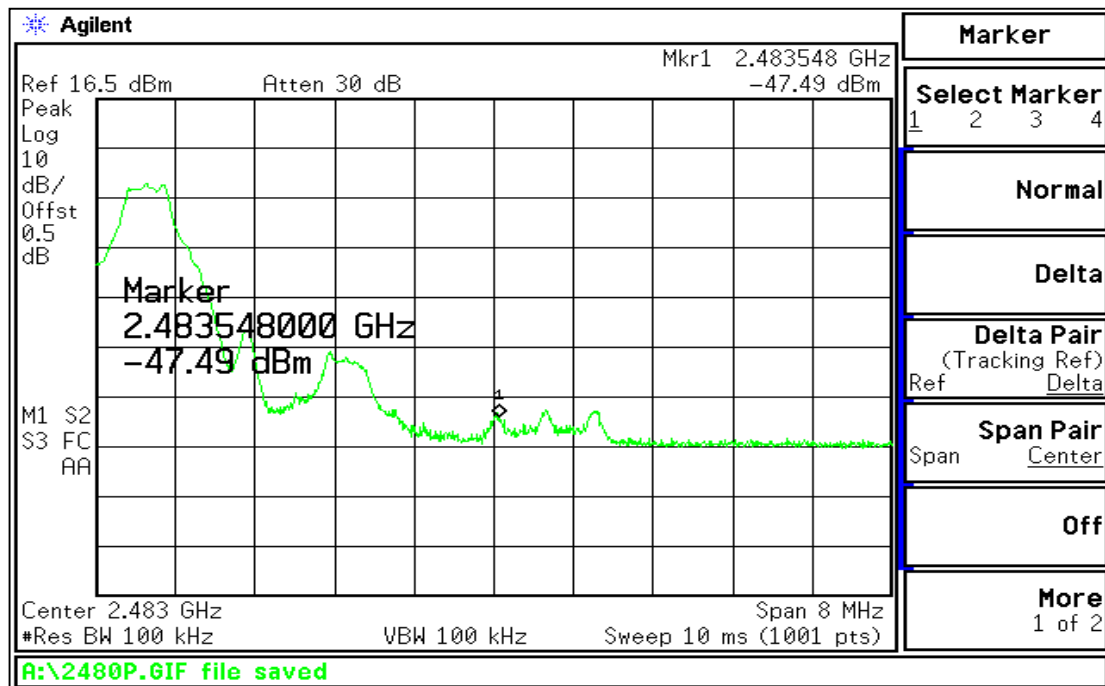
2. Test results

Frequency (MHz)	Channel No.	dBc	Limit (dBc)	Margin	Result
2,402	0	38.59	20	- 18.59	Pass
2,480	78	46.98	20	- 26.98	Pass

3. Test Plots



– Operating frequency : 2,400 MHz (Bottom channel) –



– Operating frequency : 2,480 MHz (Top channel) –

VIII. NUMBER OF HOPPING CHANNELS (Section 15.247(a))

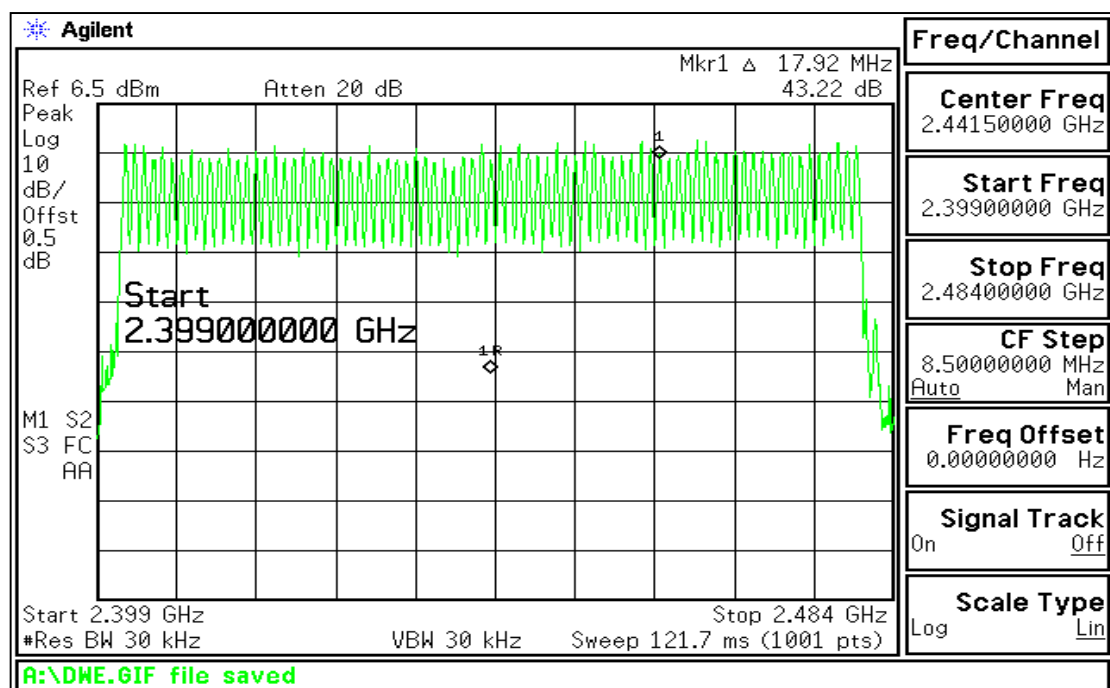
1. Test Procedure

The EUT was operating in hopping transmission mode. The EUT was connected to a spectrum analyzer through a 50 ohm RF cable and spectrum analyzer was set Maxhold mode, and then keep the EUT in hopping mode.

2. Limits

Hopping channel Frequency Range	Number of channels	Limit	Result
2,402 ~ 2,480 MHz	79	>75	Pass

3. Test Plots



- The number of hopping channels -

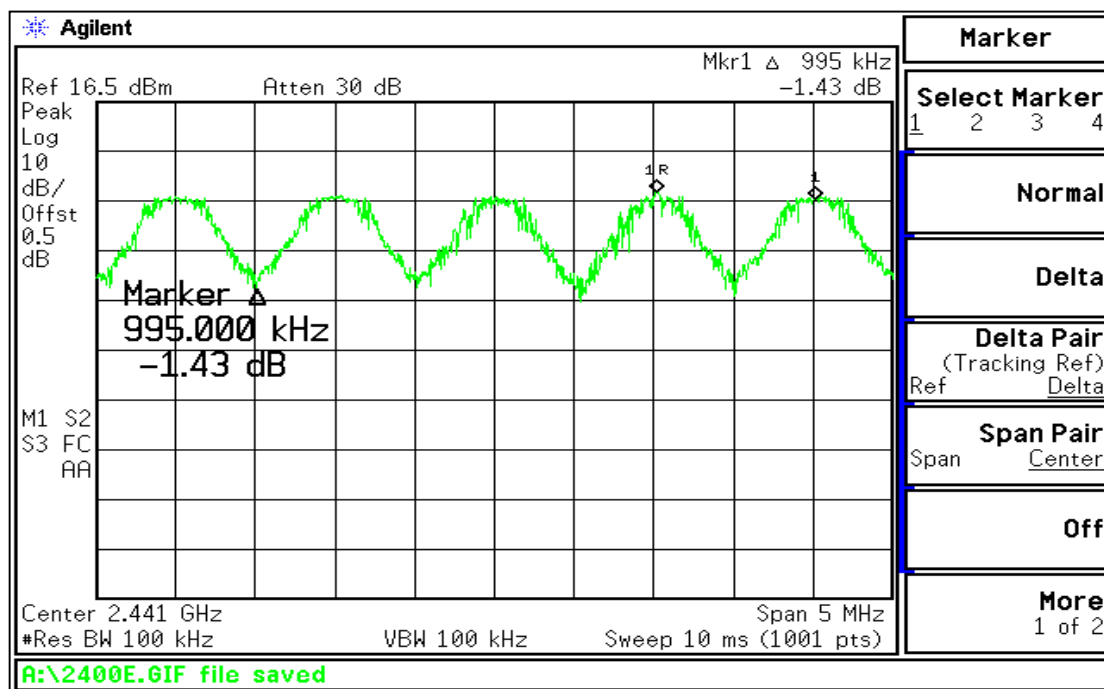
IX. CHANNEL SEPARATION (Section 15.247(a))**1. Test Procedure**

The EUT was connected to a spectrum analyzer through a 50 ohm RF cable and spectrum analyzer was set Maxhold mode. By using the Max Hold function record the separation of two adjacent channels. And for measuring 20 dB occupied bandwidth at a non-hopping mode, the value was recorded by using Maxhold function

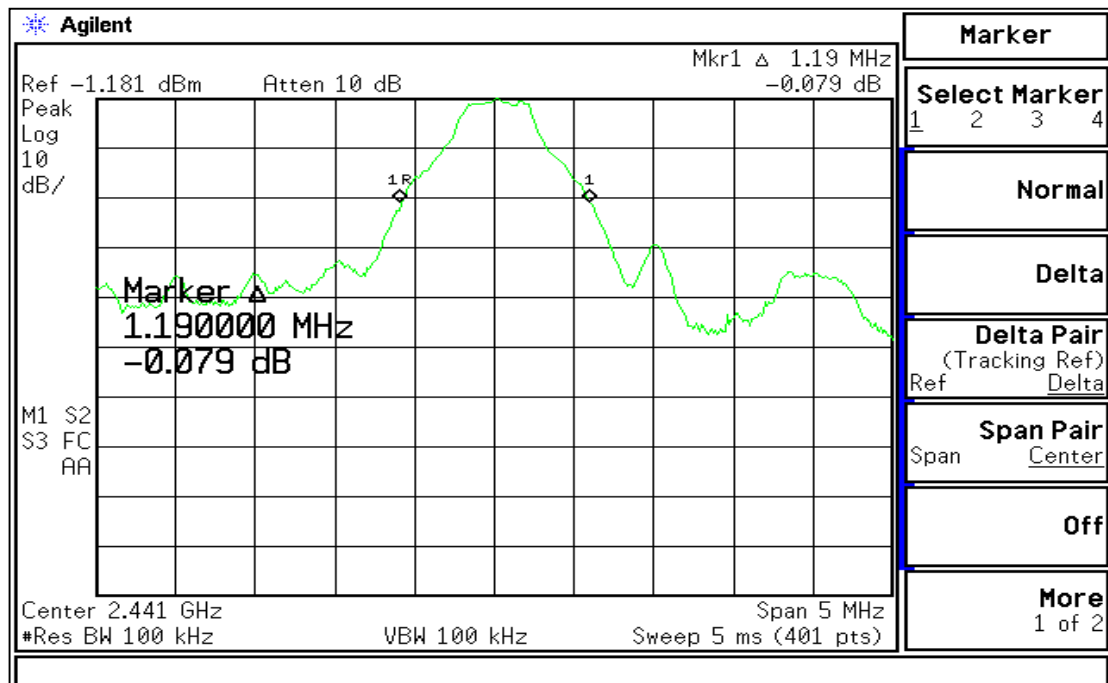
2. Limits

Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The 20 dB bandwidth is 1.19 MHz and this value is greater than 25 kHz, so the limit is 793 kHz.

Hopping channel Frequency Range	Channel separation (kHz)	Limit (kHz)	Result
2,402 ~ 2,480 MHz	995	793>	Pass

3. Test plots

– Channel Separation –



– 20 dB bandwidth of the hopping channel –

X I . Average time of occupancy (Section 15.247(a))**1. Test Procedure**

The EUT was connected to a spectrum analyzer through a 50 ohm RF cable. Adjust the center frequency of spectrum analyzer on any frequency be measured and set spectrum analyzer to zero span mode. And then, set RBW and VBW of spectrum analyzer to proper value. Measure the time duration of one transmission. And the number of occupied channel on the measured frequency while the EUT was operating in hopping transmission mode. Different packet type for this device was tested and the worst value was recorded.

2. Limits and Test results

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

Operating Frequency	Time of occupancy Dwell Time (ms)	Packet Type	Limit (ms)	Result
2,402 MHz	286.15	DH5	<400	Pass
2,441 MHz	287.12	DH5	<400	Pass
2,480 MHz	286.15	DH5	<400	Pass

3. Sample calculation

Example)

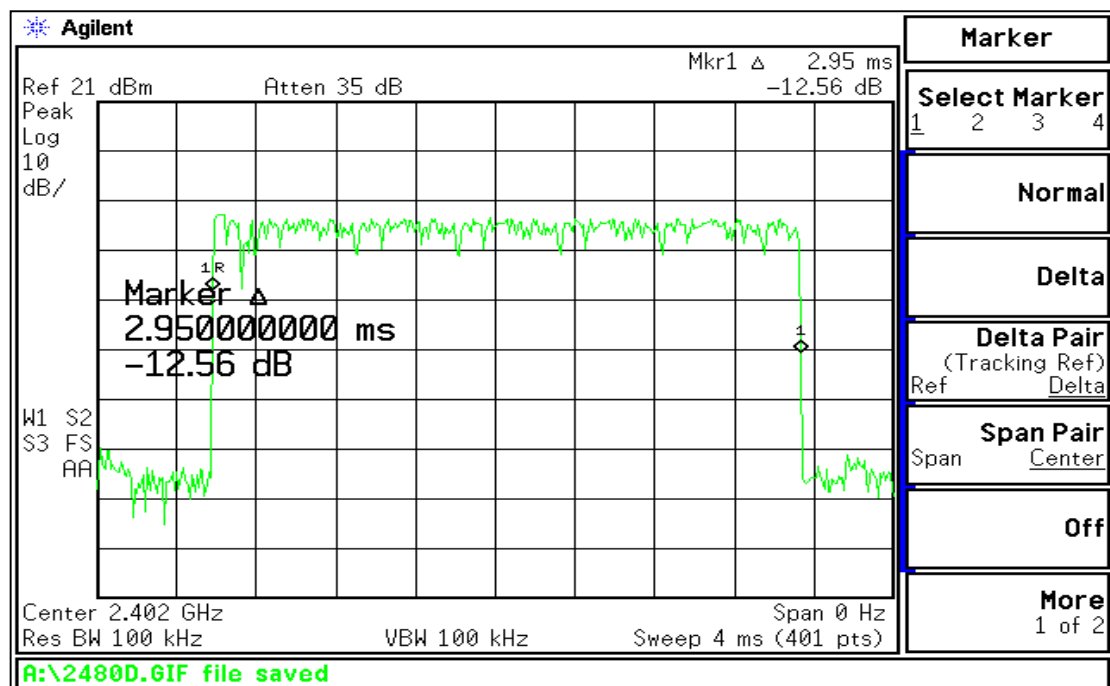
97 (the number of occupied channel while the EUT was operating in hopping transmission mode in 0.4 x 79 sec) x 2.96 (dwell time) = 287.12 ms

Low Channel : $97 \times 2.95 = 286.15 \text{ ms} < 400 \text{ ms}$

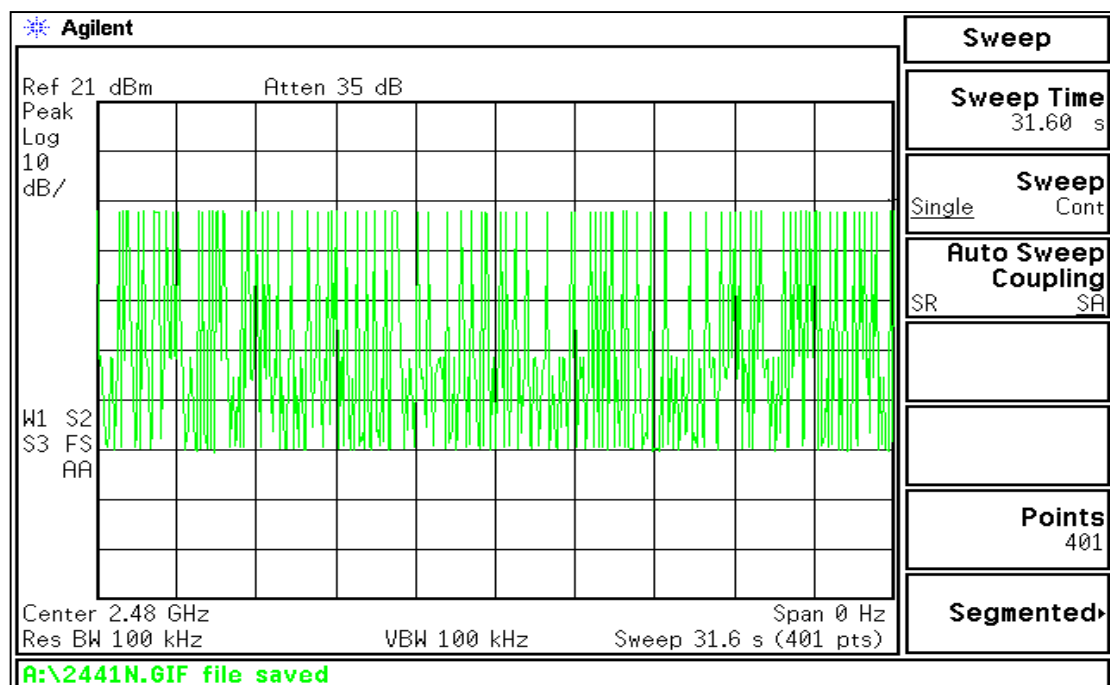
Middle Channel : $97 \times 2.96 = 287.12 \text{ ms} < 400 \text{ ms}$

Top Channel : $97 \times 2.95 = 286.15 \text{ ms} < 400 \text{ ms}$

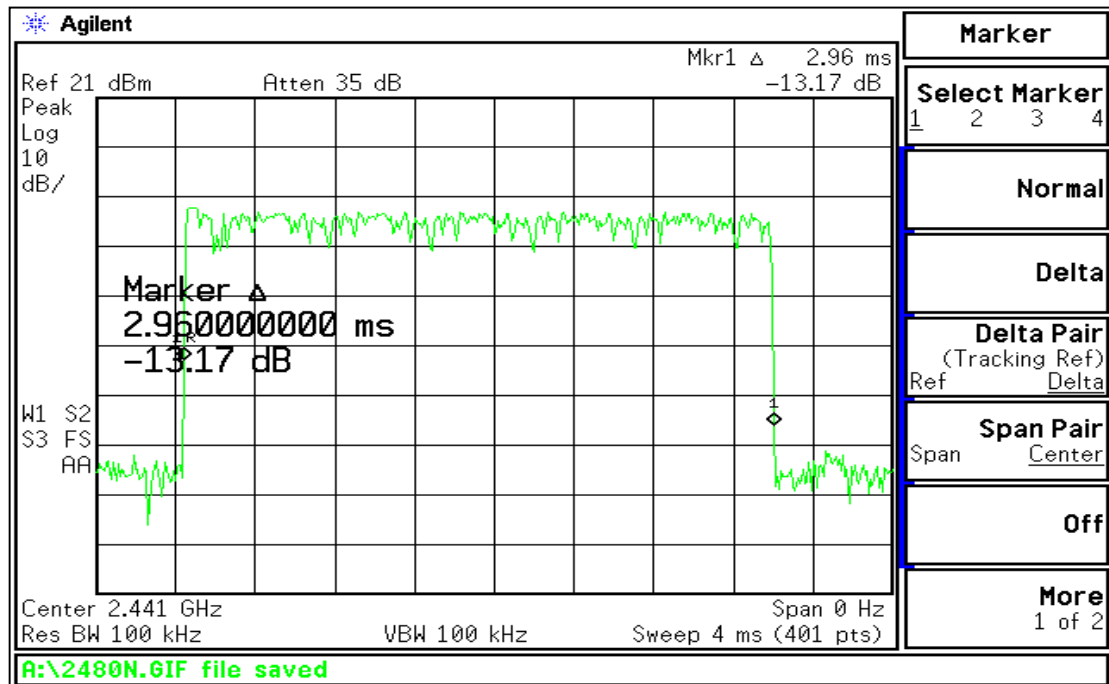
4. Test Plots



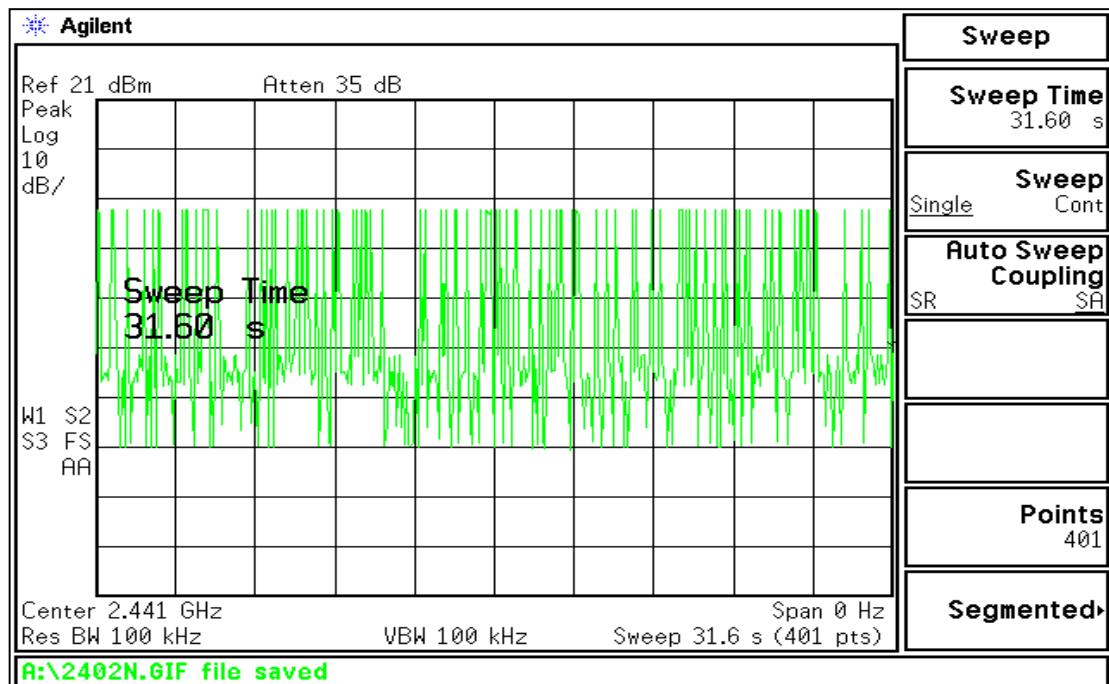
– Dwell Time (bottom channel) –



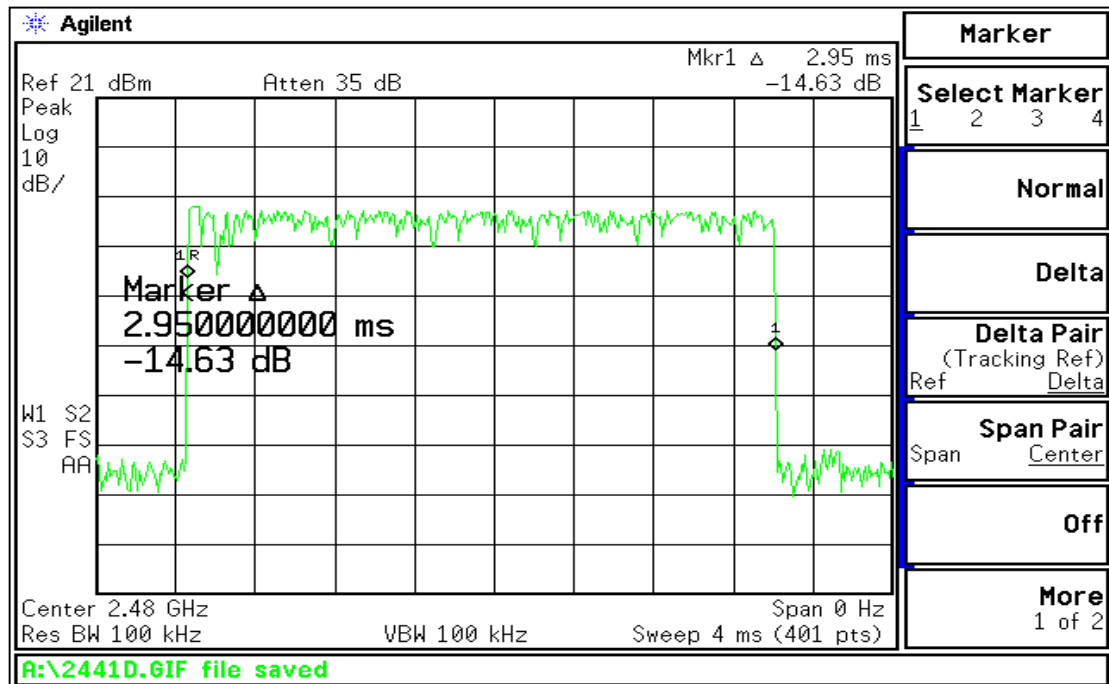
– The number of occupied channel (bottom channel) –



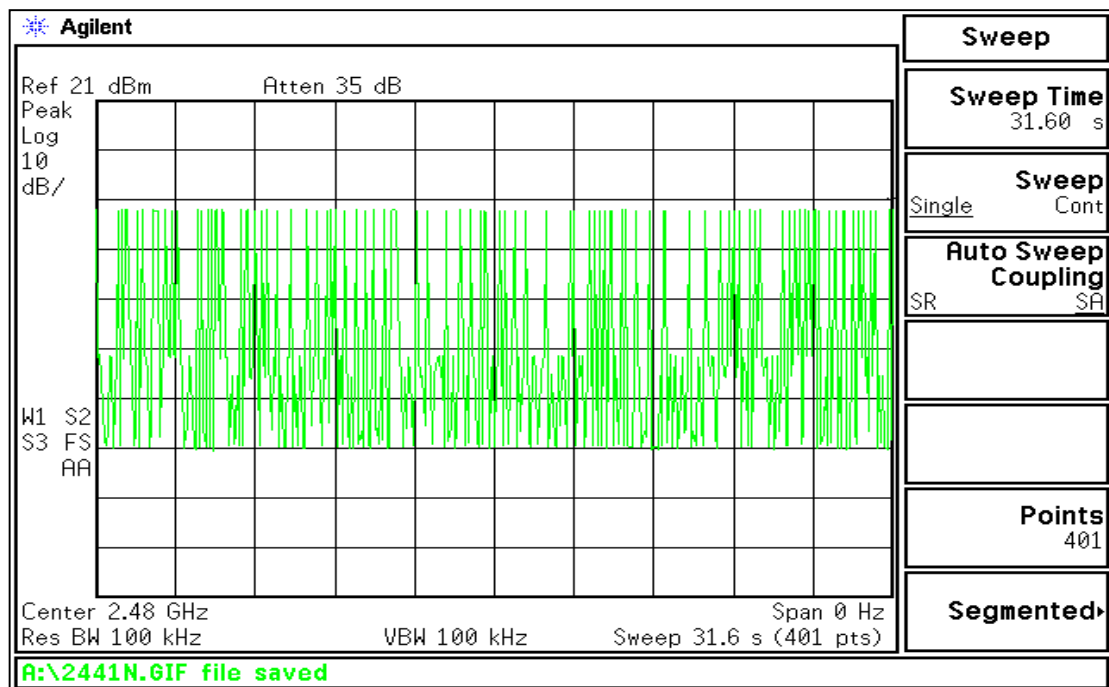
– Dwell Time (middle channel) –



– The number of occupied channel (middle channel) –



– Dwell Time (top channel) –



– The number of occupied channel (top channel) –

X II. TEST EQUIPMENTS USED FOR MEASUREMENTS

<u>Equipment</u>	<u>Model No.</u>	<u>Manufacturer</u>	<u>Serial No.</u>	<u>Effective Cal. Duration</u>
[x] EMI Receiver (20 MHz-1 GHz)	ESVS30	R & S	830516/002	03/25/06-03/25/07
[x] EMI Receiver (20 Hz-7 GHz)	ESI	R & S	835571/004	10/14/05-10/14/06
[x] Spectrum Analyzer (9 kHz-26.5 GHz)	8563A	H. P.	3222A02069	03/16/06-03/16/07
[x] Spectrum Analyzer (3 Hz-50 GHz)	E4448A	Agilent	MY43360322	03/16/06-03/16/07
[x] Pre-Amplifier (0.1-3000 MHz, 30 dB)	8347A	H. P.	2834A00543	05/19/06-05/19/07
[x] Pre-Amplifier (1-26.5 GHz, 35 dB)	8449B	H. P.	3008A00302	06/14/06-06/14/07
[x] Bluetooth Tester.	CBT	R & S	100052	
[x] LISN(50 Ω , 50 μ H) (10 kHz-100 MHz)	ESH3-Z5	R & S	826789/009	05/16/06-05/16/07
[x] Plotter	7470A	H. P.	3104A21292	-
[x] Bluetooth tester	CBT	R&S	1153.9000.35	06/11/06-06/11/07
[] Tuned Dipole Ant. (30 MHz-300 MHz)	VHA 9103	Schwarzbeck	-	*
[] Tuned Dipole Ant. (300 MHz-1 GHz)	UHA 9105	Schwarzbeck	-	*
[x] BiConi-Log Ant. (30 MHz -1 GHz)	VULB9168	Schwarzbeck	9168-167	*
[x] Horn Ant. (1 GHz-18 GHz)	3115	EMCO	-	*
[x] Horn Ant. (18 GHz-40 GHz)	3116	EMCO	-	*
[] Active Loop Ant. (9 kHz-30 MHz)	6502	EMCO	2532	*
[] DC Power Supply	6260B	H.P.	1145A04822	-
[] Shielded Room (5.0 m x 4.5 m)	-	SIN-MYUNG	-	-

* Each set of antennas has been calibrated to ensure correlation with ANSI C63.5 standard. The calibration of antennas is traceable to Korea Standard Research Institute(KSRI)