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IT R&D Center
416, Maetan-3Dong,
Youngtong-Gu, Suwon-city,
Gyeonggi-Do, Korea 443-742

FCC CFR47 PART 15 SUBPART CERTIFICATION REPORT

Model Tested:	SGH-T409
FCC ID (Requested):	A3LSGHT409
Report No:	FE-063-R1
Job No:	FE-063
Date issued:	May 19, 2007

- Abstract -

All measurement reported herein accordance with FCC Rules, 47CFR
Part2, Part15.

Prepared By

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Authorized By

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1. GENERAL INFORMATION

The following information is in accordance with FCC Rules, 47CFR Part15, Subpart C

1.1 §2.1033 GENERAL INFORMATION

- Applicant Name: SAMSUNG ELECTRONICS CO., LTD.
- Address: 416, Maetan-3Dong, Youngtong-Gu, Suwon City
Gyeonggi-Do, KOREA 443-742
- Attention: SungJoo KIM, Engineering Manager(QA Lab)
- FCC ID: A3LSGHT409

- Quantity: Quantity production is planned.
- Equipment (EUT) Type: Dual-Band GSM Mobile Phone With Bluetooth and WLAN
- FCC Classification(s): FCC Part 15 Frequency Hopping Spread Spectrum Transceiver (DSS)
- Frequency Range: 2412 ~ 2462MHz(DSSS/OFDM)
- Max. Output Power: Peak Conducted(802.11b)
Peak Conducted(802.11g)
- FCC Rule Part(s): §15.247, §2
- Dates of Test: May 18, 2007
- Place of Test: SAMSUNG Lab,
- Test Report S/N: FE-063-R1

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4. (Version :2003) Radiated testing was performed at an antenna to EUT distance 3 meters.

2.1 EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT EXERCISE

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements. According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209 and 15.247 under the FCC Rules Part 15 Subpart C.

2.3 GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4. (Version :2003) Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3 m away from the receiving antenna, which varied from 1 m to 4 m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max emission, the relative positions of this hand-held transmitter (EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C63.4. (Version: 2003)

2.4 DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition. Test mode used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

Channel low, mid and high with highest data rate (worst case) is chosen for full testing.

3. INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipments, which is traceable to recognized national standards.

4. FACILITIES AND ACCREDITATIONS

4.1 FACILITIES

These measurement test were conducted at the **SAMSUNG ELECTRONICS CO., LTD(SUWON)**. The site address is 416, Maetan-3Dong, Youngtong-Gu, Suwon City, Gyeonggi-Do, KOREA 443-742. The site has 1 Fully-anechoic chamber and measurement facility.

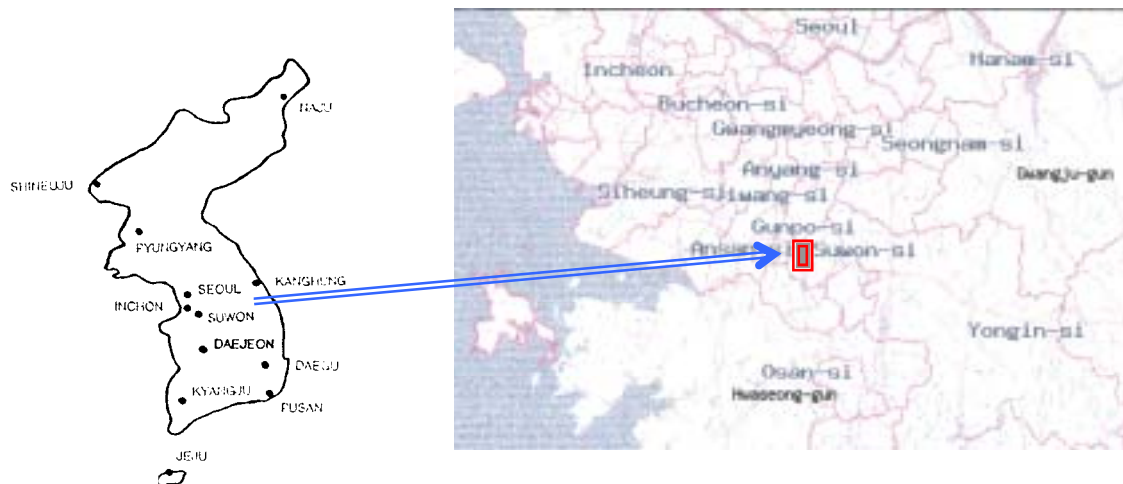


Figure1. Map of the Suwon City area.

4.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of Linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements. Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers. Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

5. SETUP OF EQUIPMENT UNDER TEST

5.1 SETUP CONFIGURATION OF EUT

The radiated and spurious measurements were made Fully-anechoic chamber at a 3-meter test range (see Figure2). The equipment under testing was placed on a wooden turntable 3-meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer.



Figure2. Photograph of 3m Fully Anechoic Chamber

6. TEST RESULT

6.1 SUMMARY

Company Name: SAMSUNG ELECTRONICS CO.,LTD..

FCC ID: A3LSGHT409

Method/System: Digital Transmission System (DTS)

Number of Channels: 11

Table 1. Summary of Test Results

FCC Part Section(s)	RSS 210 Section	Test Description	Test Limit	Test Condition
TRANSMITTER MODE (TX)				
15.247(a)(2)	5.9.1	6dB Bandwidth	> 500kHz	CONDUCTED
15.247(b)	6.22(o)(a3)	Transmitter Output Power	< 1 Watt	
15.247(d)	6.2.2(o)(b)	Transmitter Power Spectral Density	< 8dBm / 3kHz	
15.247(c)	5.9.1 6.2.2(o) (e1)	Occupied Band Width Out-of-Band Emissions (Band Width at 20dB below)	Radiated <20dBc. Emissions in restricted bands must meet the radiated limits detailed in 15.209	
15.205 15.209	6.2.1 6.3	General Field Strength Limits (Restricted Bands and Radiated Emission Limits)	< FCC 15.209 limits or < RSS-210 table 3 limits Emissions in restricted bands must meet the radiated limits detailed in 15.209	RADIATED (30MHz-1GHz) (1-25 GHz)
15.207	6.6	AC Conducted Emissions 150kHz – 30MHz	EN55022	Line Conducted
RECEIVER MODE (RX)				
15.207	7.4	AC Conducted Emissions 150kHz – 30MHz	EN55022	Line Conducted
15.209	7.3	General Field Strength Limits (Restricted Bands and Radiated Emissions Limits)	< FCC 15.209 limits or < RSS-210 table 3 limits	RADIATED (30MHz-1GHz) (1-25 GHz)

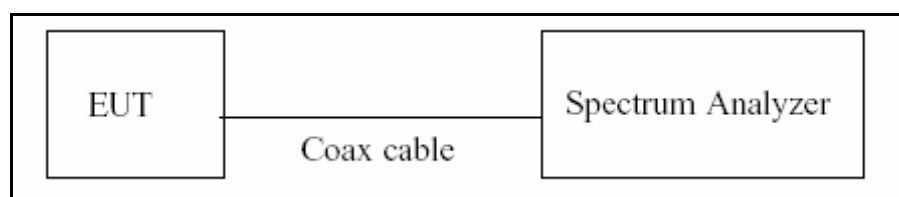
6.2 6dB Bandwidth Measurement (802.11b/g)

§15.247(a)(2)

The bandwidth at 6dB down from the highest in-band spectral density is measured with a spectrum analyzer connected to the receive antenna while the EUT is operating in transmission mode at the appropriate frequencies.

The minimum permissible 6dB bandwidth is 500 kHz.

■ TEST CONFIGURATION



■ TEST PROCEDURE

The transmitter output is connected to the Spectrum Analyzer.

The Spectrum Analyzer is set to

RBW: 100 KHz

VBW: 100 KHz

SPAN: 40 MHz

■ TEST RESULTS

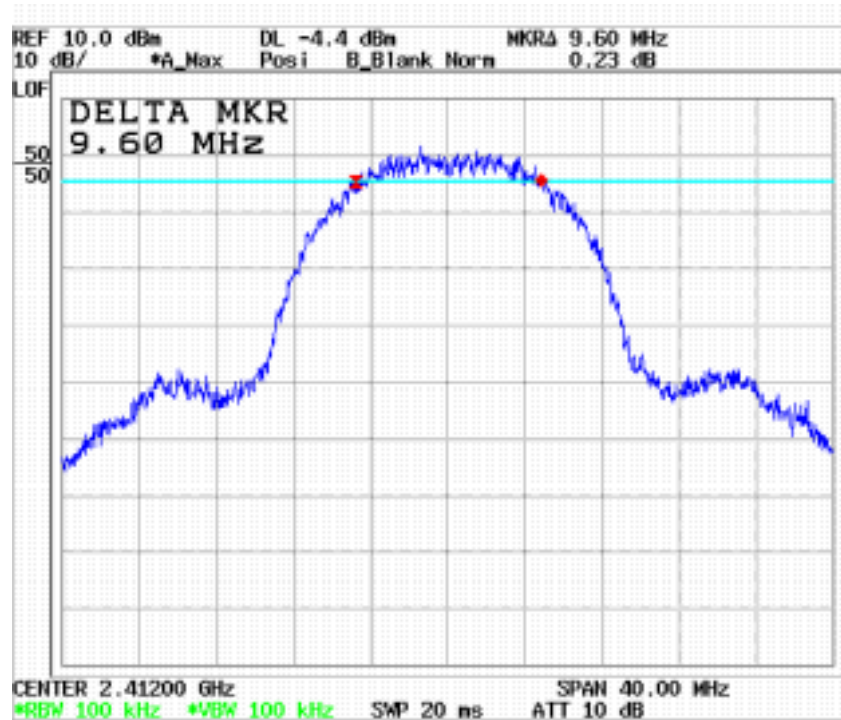
Table 2. Conducted 6dB Bandwidth Measurements for 802.11b

802.11b Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	9.60	0.500	Pass
2437	6	9.68	0.500	Pass
2462	11	9.80	0.500	Pass

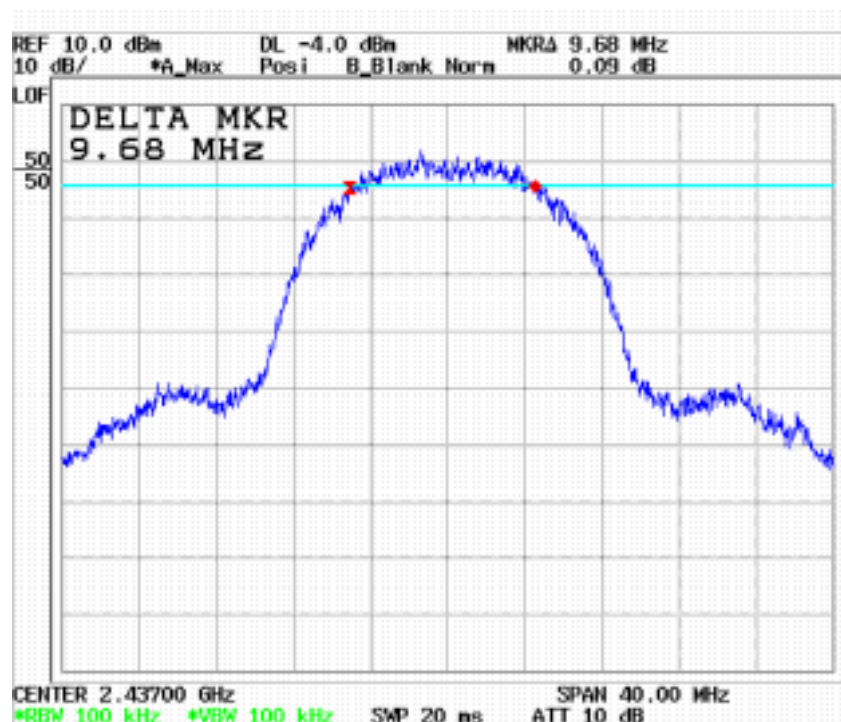
Table 3. Conducted 6dB Bandwidth Measurements for 802.11g

802.11g Mode		Measured Bandwidth [MHz]	Minimum Bandwidth [MHz]	Pass / Fail
Frequency [MHz]	Channel No.			
2412	1	16.60	0.500	Pass
2437	6	16.52	0.500	Pass
2462	11	16.60	0.500	Pass

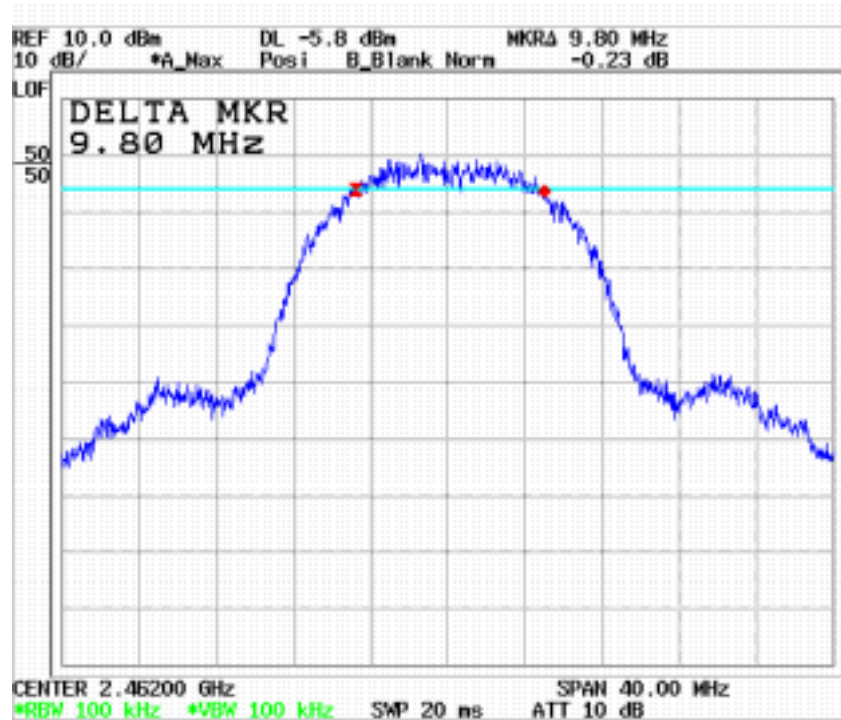
■ RESULT PLOTS



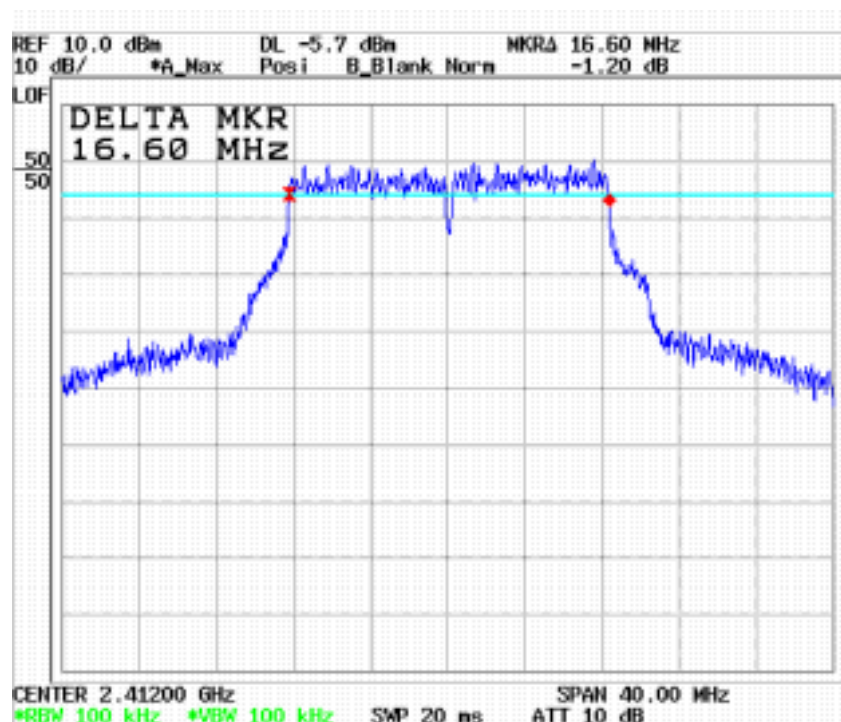
6dB Bandwidth plot (802.11b-CH 1)



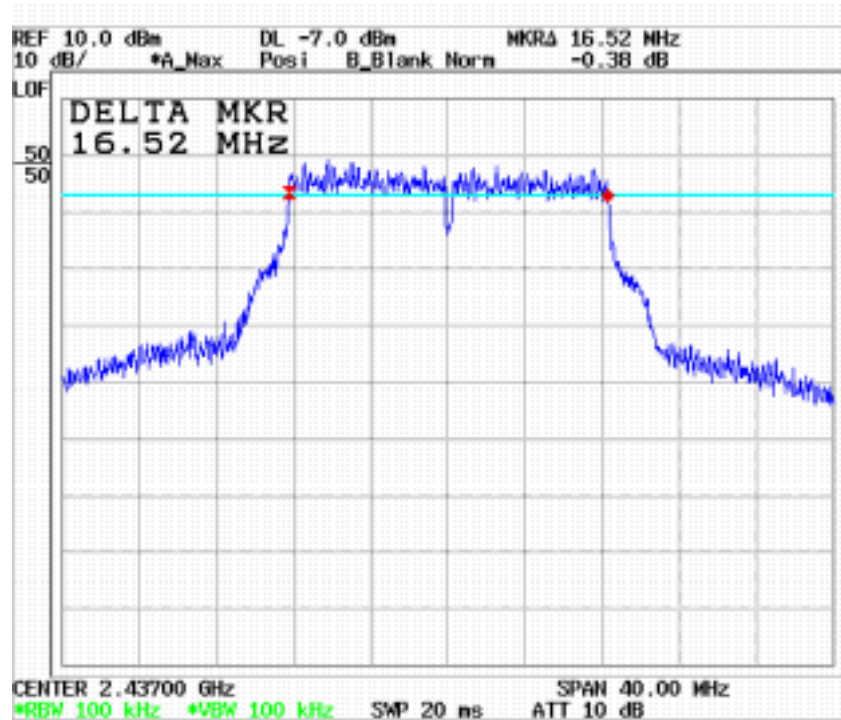
6dB Bandwidth plot (802.11b-CH 6)



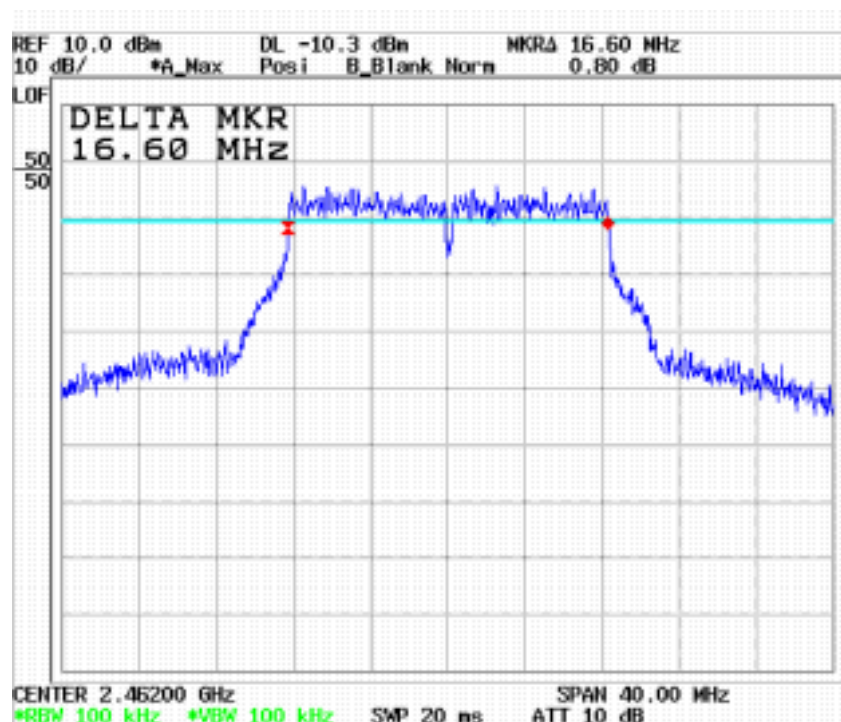
6dB Bandwidth plot (802.11b-CH 11)



6dB Bandwidth plot (802.11g-CH 1)



6dB Bandwidth plot (802.11g-CH 6)



6dB Bandwidth plot (802.11g-CH 11)

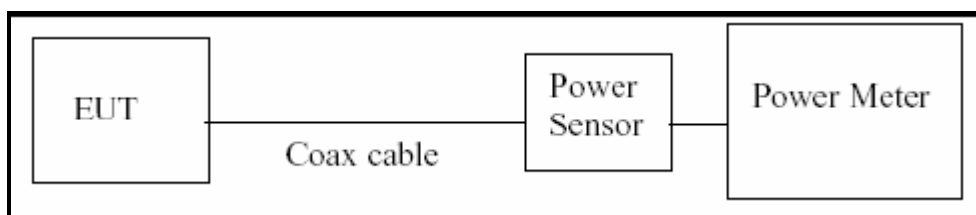
6.3 Output Power Measurement (802.11b/g)

§15.247(b)

A transmitter antenna terminal of EUT is connected to the input of a RF power sensor. Measurement is made while the EUT is operating in transmission mode at the appropriate frequencies.

The maximum permissible conducted output power is 1 Watt.

■ TEST CONFIGURATION



■ TEST RESULTS

Table 4. Conducted Output Power Measurements

802.11b Mode		Rate (Mbps)	Measured Power	limit
Frequency[MHz]	Channel No.			
2412	1	1 Mbps	15.48	1 Watt
		5.5 Mbps	15.27	1 Watt
		11 Mbps	15.50	1 Watt
2437	6	1 Mbps	15.83	1 Watt
		5.5 Mbps	15.80	1 Watt
		11 Mbps	15.52	1 Watt
2462	11	1 Mbps	14.99	1 Watt
		5.5 Mbps	15.05	1 Watt
		11 Mbps	15.28	1 Watt

Table 5. Conducted Output Power Measurements

802.11g Mode		Rate (Mbps)	Measured Power(dBm)	Limit (dBm)
Frequency[MHz]	Channel No.			
2412	1	6 Mbps	15.16	30
		9 Mbps	15.71	30
		12 Mbps	15.50	30
		18 Mbps	15.26	30
		24 Mbps	15.08	30
		36 Mbps	15.53	30
		48 Mbps	15.12	30
		54 Mbps	15.25	30
2437	6	6 Mbps	15.05	30
		9 Mbps	15.15	30
		12 Mbps	15.54	30
		18 Mbps	15.30	30
		24 Mbps	15.70	30
		36 Mbps	15.75	30
		48 Mbps	15.82	30
		54 Mbps	15.42	30
2462	11	6 Mbps	15.84	30
		9 Mbps	15.67	30
		12 Mbps	15.34	30
		18 Mbps	15.60	30
		24 Mbps	15.00	30
		36 Mbps	15.21	30
		48 Mbps	15.40	30
		54 Mbps	15.74	30

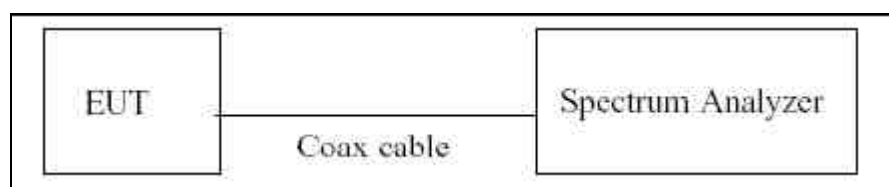
6.4 Power Spectral Density (802.11b/g)

§15.247(d)

The peak power density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies.

Minimum Standard – The transmitter power density average over 1-second interval shall not be greater than 8dBm in any 3kHz BW.

■ TEST CONFIGURATION



■ TEST PROCEDURE

The spectrum analyzer is set to :

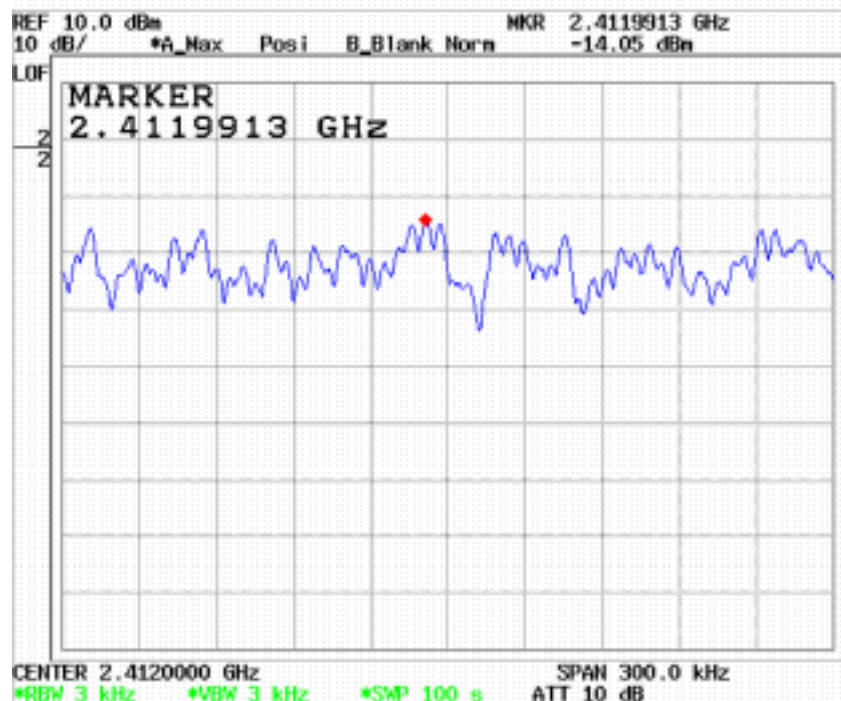
1. Span = 300 KHz
2. RBW = 3 KHz (7dB/div)
3. VBW = 3 KHz
4. Sweep = 100 sec

■ TEST RESULTS

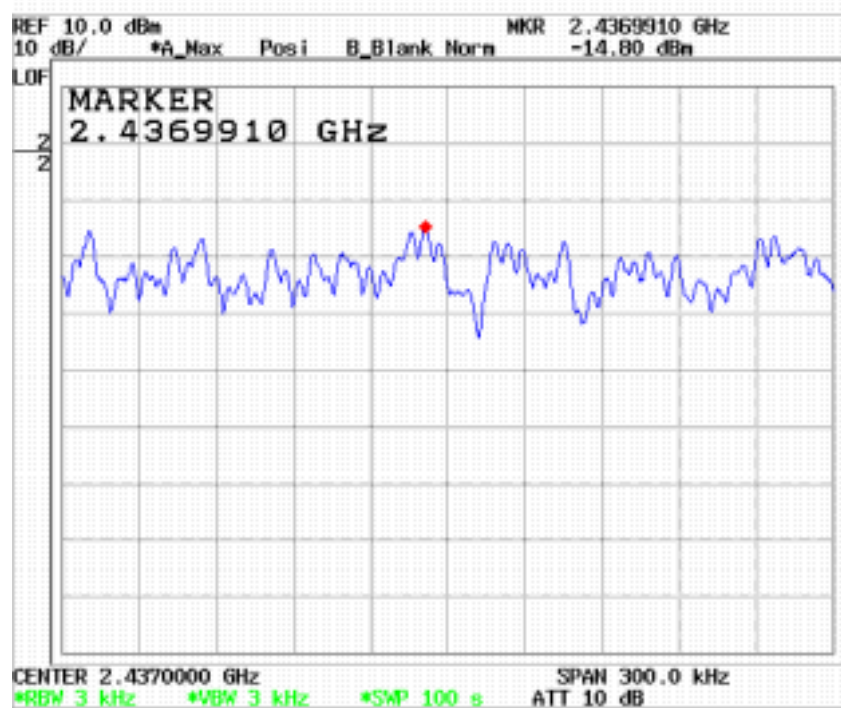
Table 6. Conducted Power Density Measurements

Frequency (MHz)	Channel No.	Mode	Test Result	
			Power Density (dBm)	Pass/Fail
2412	1	802.11b	- 14.05	Pass
2437	6		- 14.80	Pass
2462	11		- 17.38	Pass
2412	1	802.11g	- 20.94	Pass
2437	6		- 22.71	Pass
2462	11		- 22.91	Pass

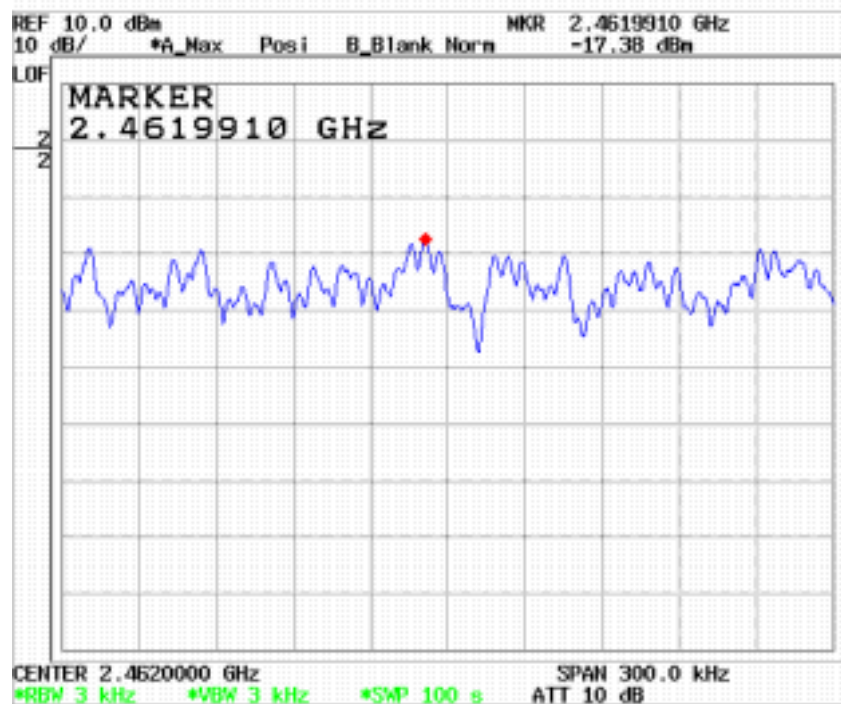
■ RESULT PLOTS



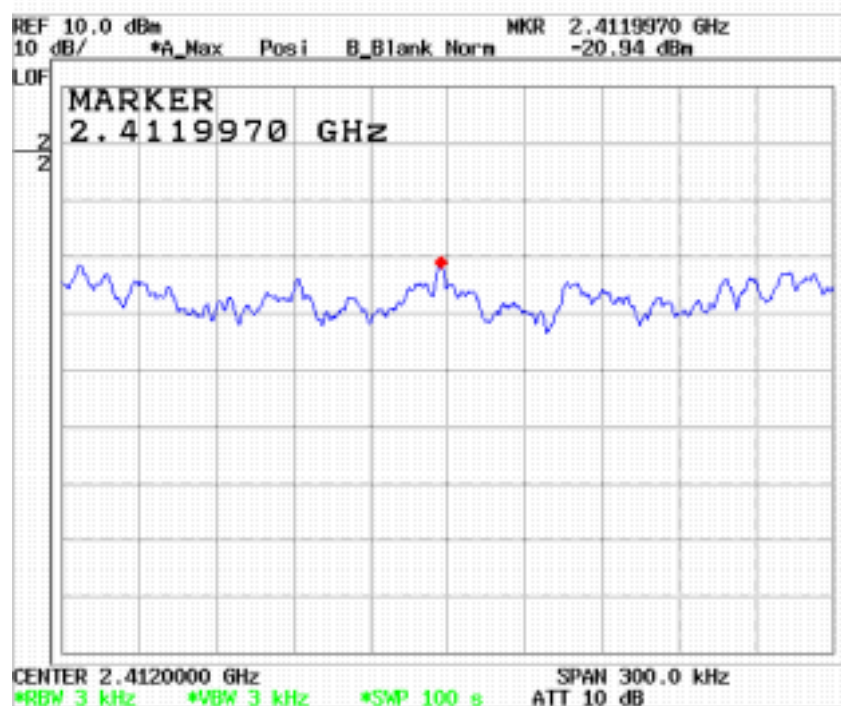
Power Spectral Density (802.11b-CH 1)



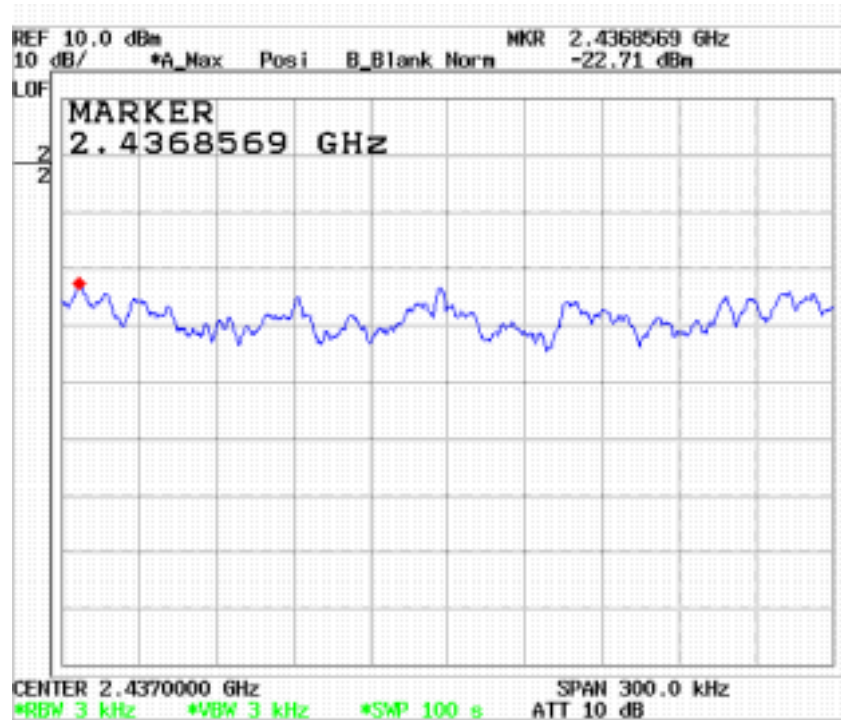
Power Spectral Density (802.11b-CH 6)



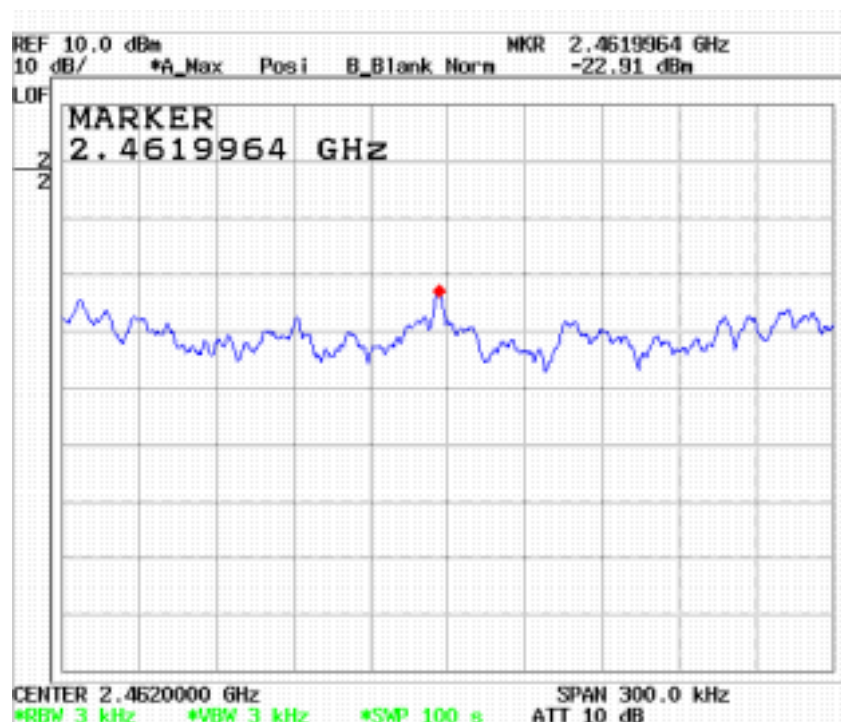
Power Spectral Density (802.11b-CH 11)



Power Spectral Density (802.11g-CH 1)



Power Spectral Density (802.11g-CH 6)



Power Spectral Density (802.11g-CH11)

6.5 Out of Band Emissions at the Band Edge/ Conducted Spurious Emissions

LIMIT

§15.247 (c) 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 20dB 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 §15.209(a) is not required. 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) (see §15.205(c)).

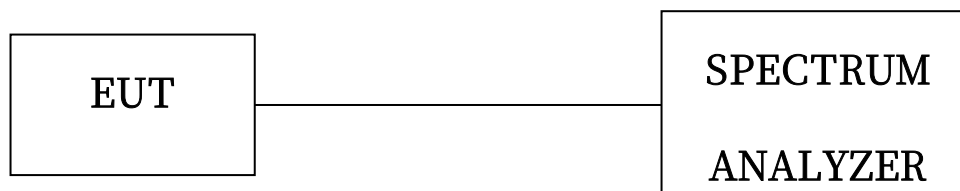
TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz.

The video bandwidth is set to 100 kHz.

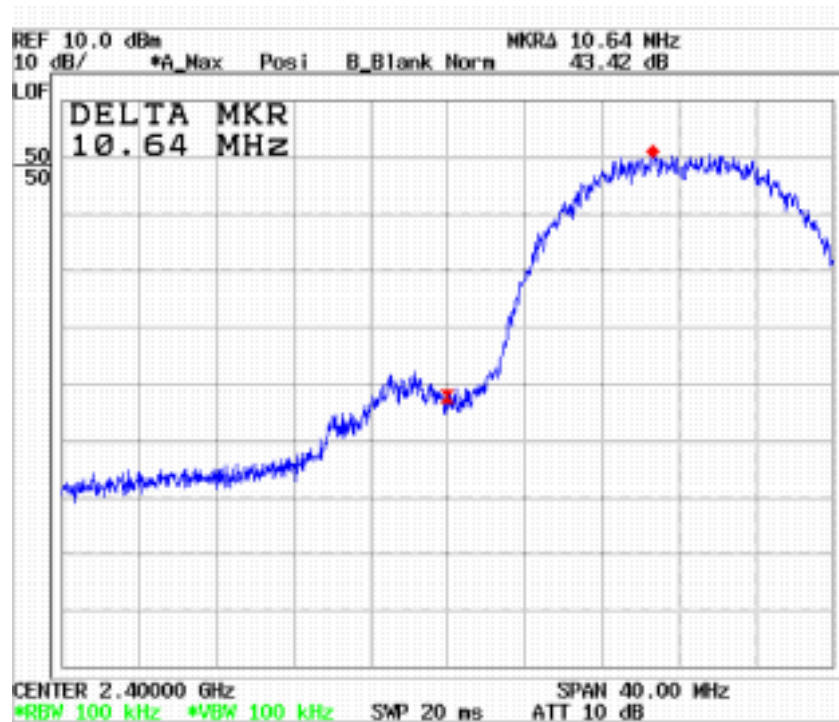
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

TEST SETUP

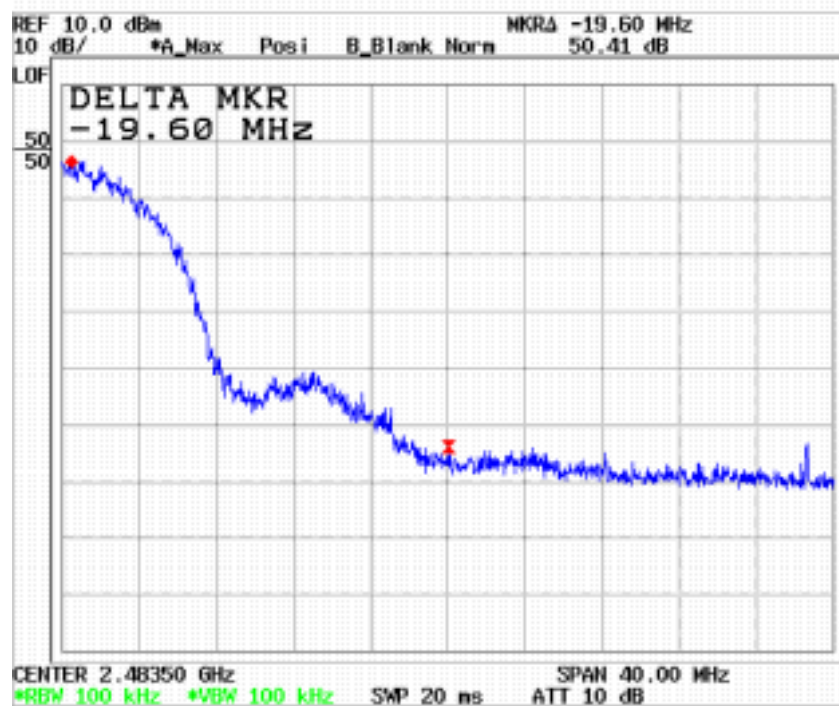


RESULTS

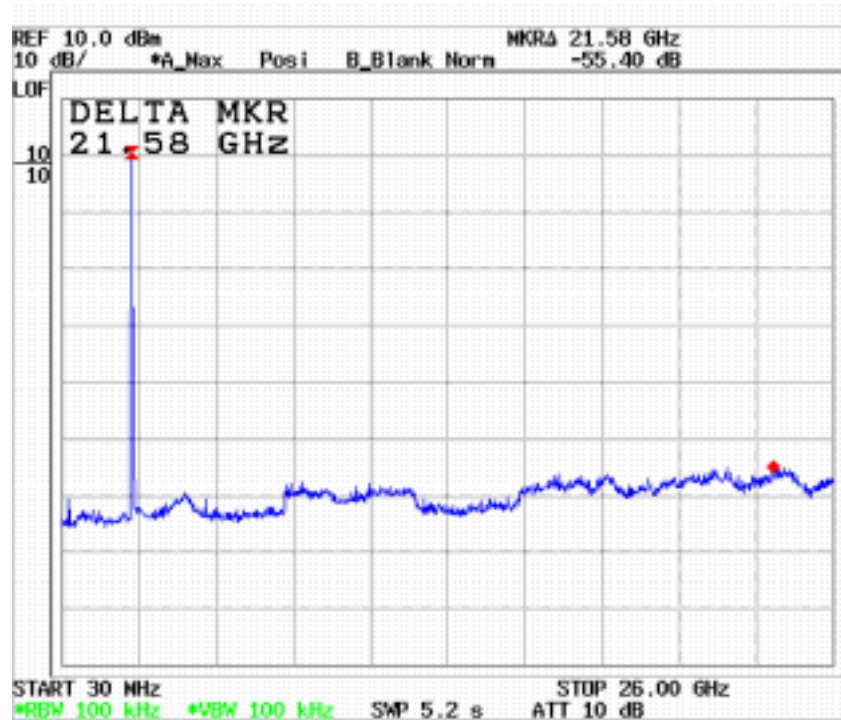
■ RESULT PLOTS



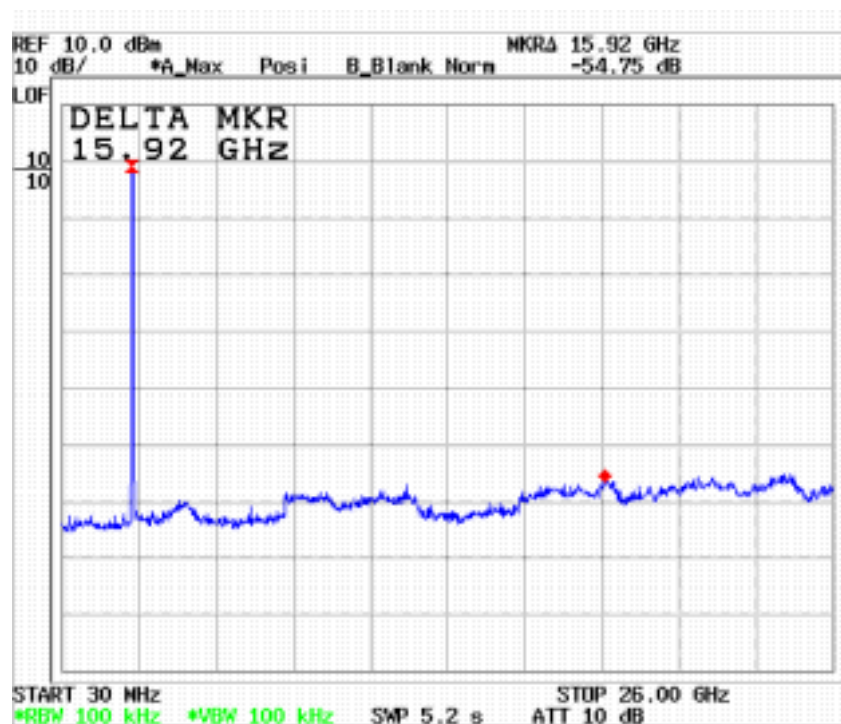
BandEdge (802.11b-CH1)



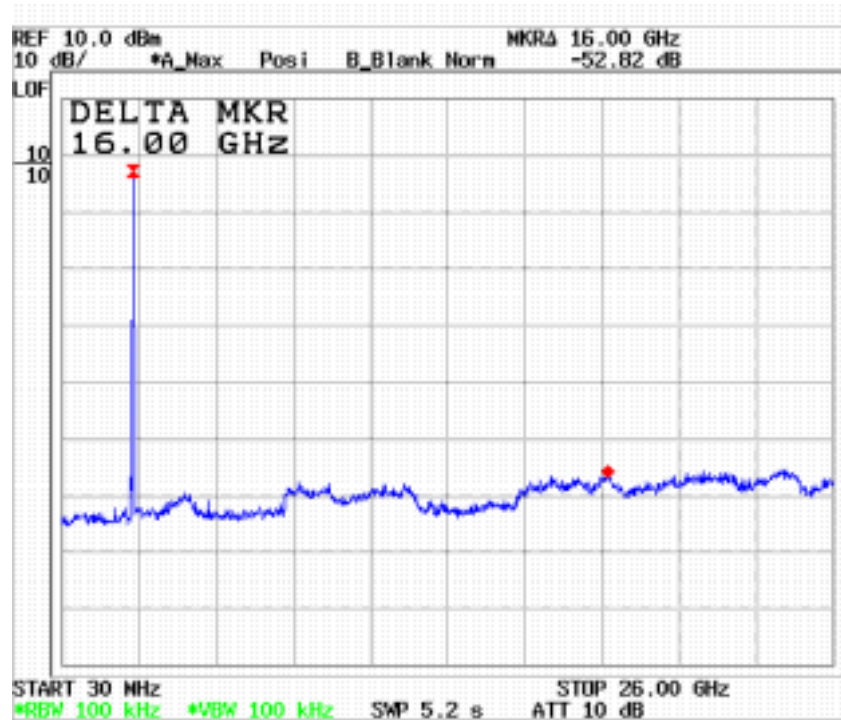
BandEdge (802.11b-CH11)



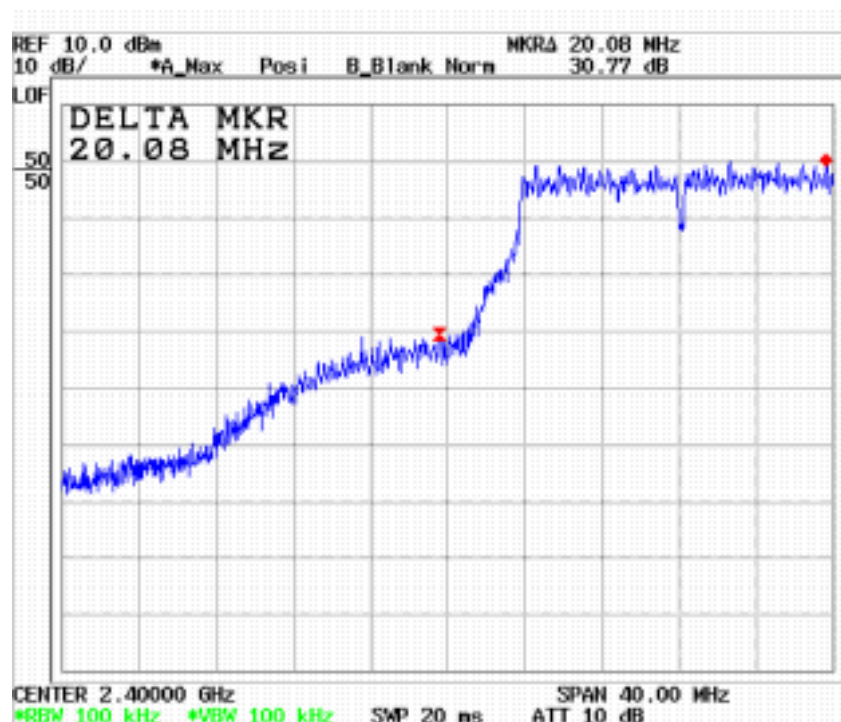
Conducted Spurious Emission (802.11b-CH1)



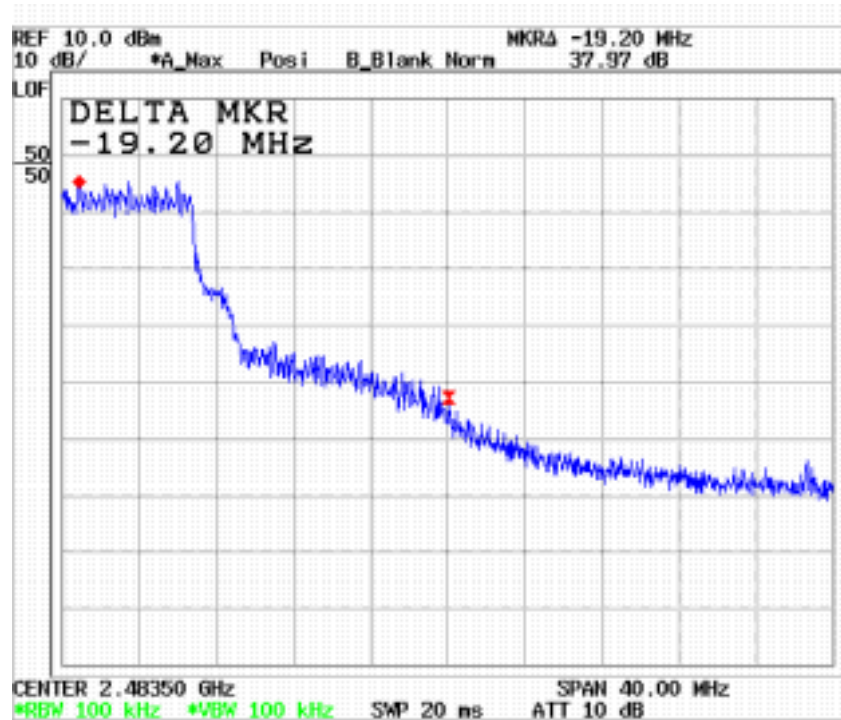
Conducted Spurious Emission (802.11b-CH6)



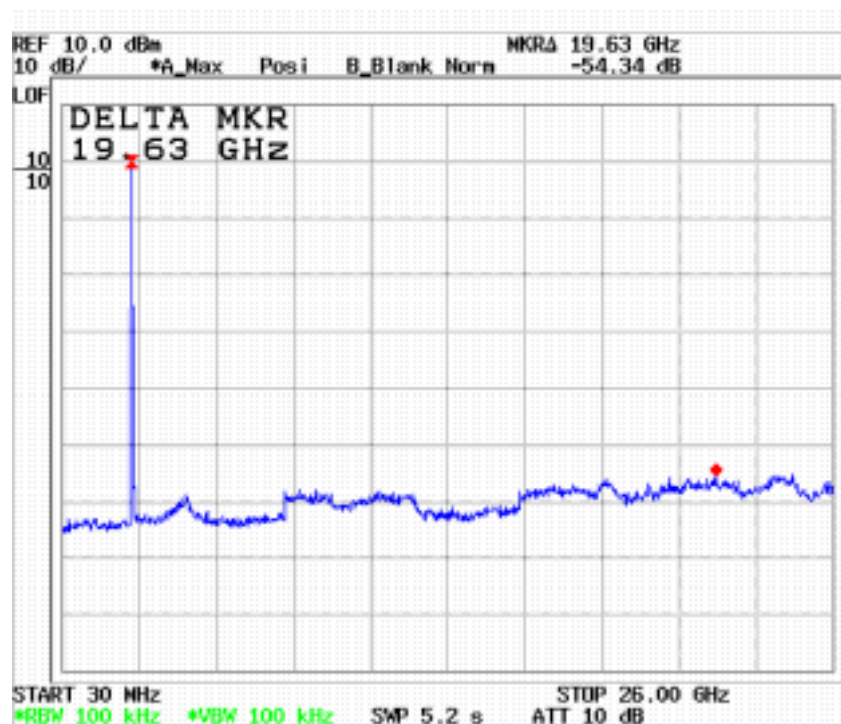
Conducted Spurious Emission (802.11b-CH11)



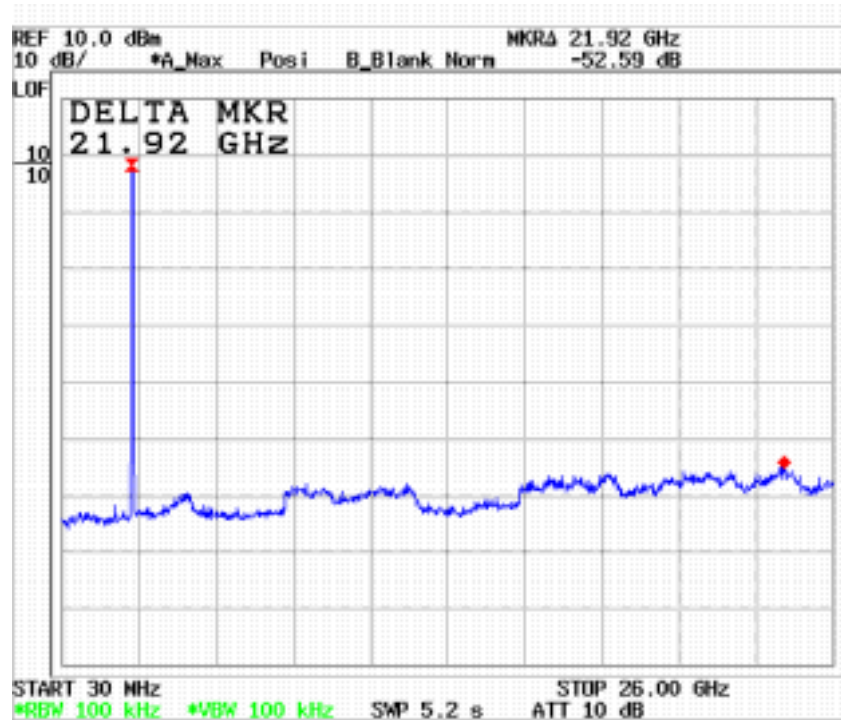
BandEdge (802.11g-CH1)



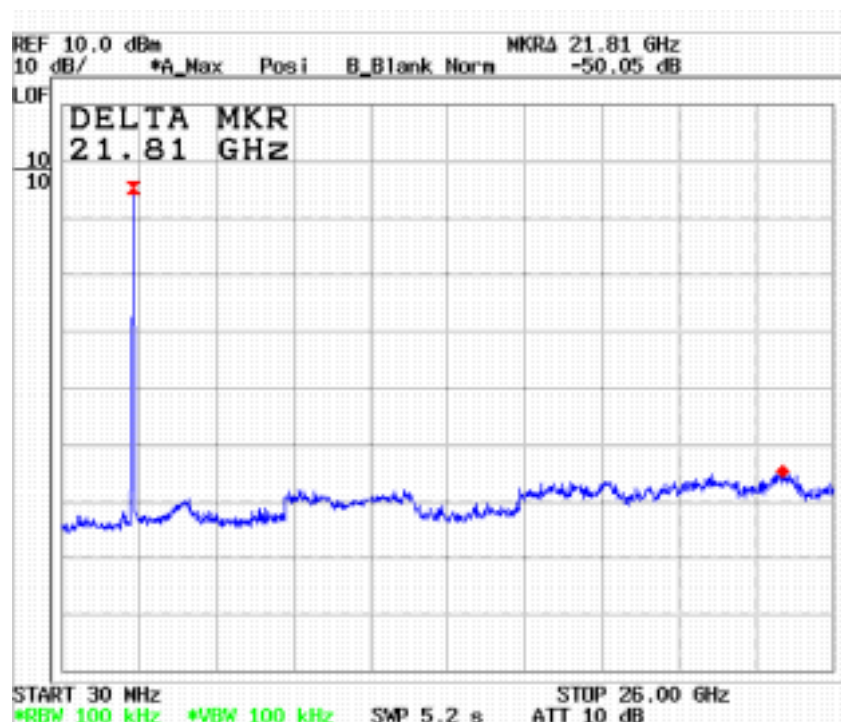
BandEdge (802.11g-CH11)



Conducted Spurious Emission (802.11g-CH1)



Conducted Spurious Emission (802.11g-CH6)



Conducted Spurious Emission (802.11g-CH11)

6.6 Radiated Measurement.

6.6.1 Radiated Spurious Emissions.

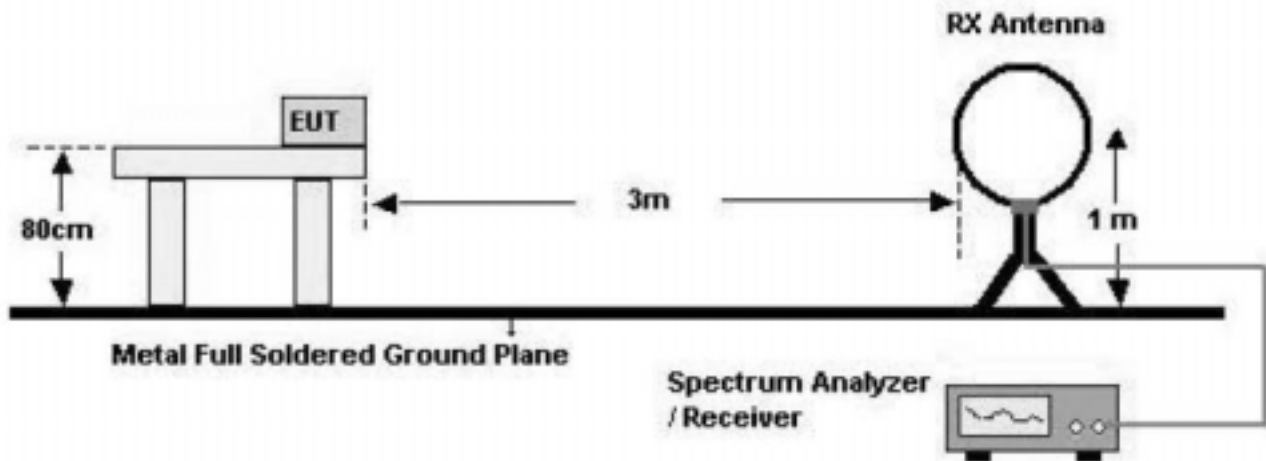
LIMIT

1. 20dBc in any 100kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed

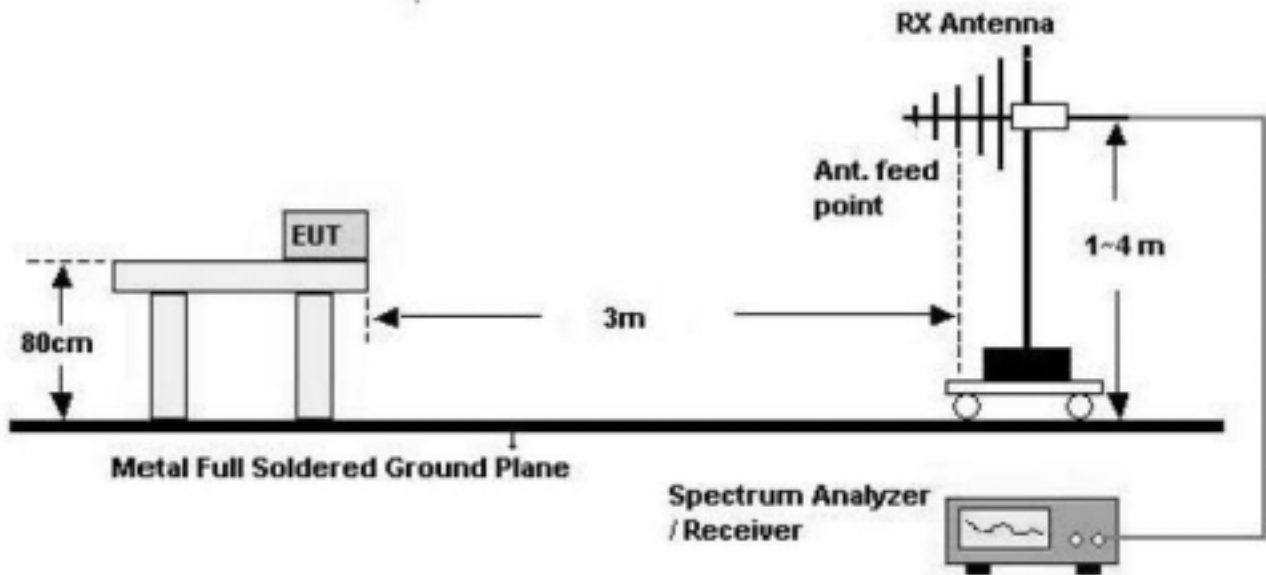
Frequency (MHz)	Field Strength (mV/m)	Measurement Distance (m)
0.009 – 0.490	$2400/F(\text{KHz})$	300
0.490 – 1.705	$24000/F(\text{KHz})$	30
1.705 – 30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Test Configuration

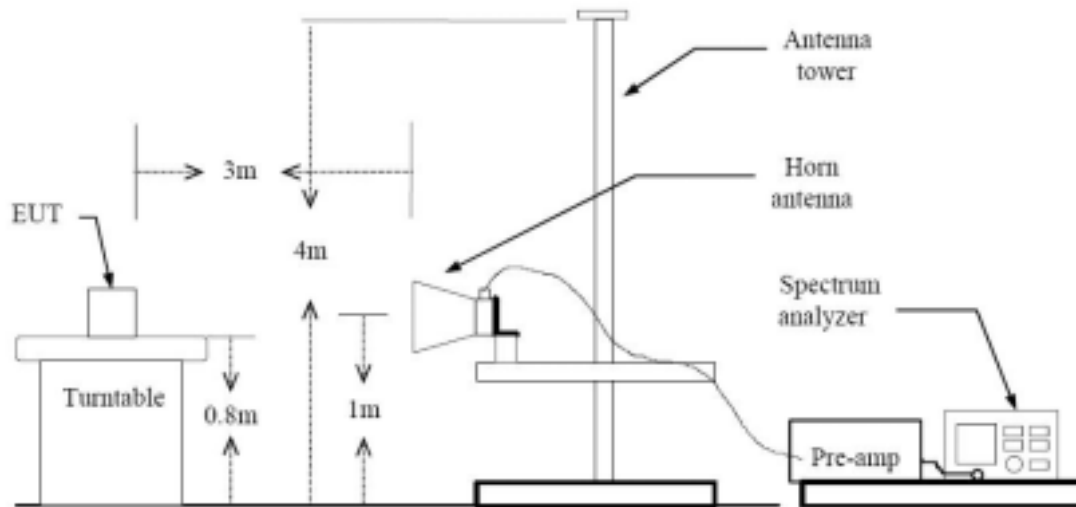
Below 30 MHz



30 MHz - 1 GHz



Above 1 GHz



TEST PROCEDURE

1. The EUT is placed on a turntable, which is 0.8 m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3 m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.

TEST RESULTS

9 kHz – 30MHz

Operation Mode: Normal Link

Notes:

1. *Measuring frequencies from 9 kHz to the 30MHz.*
2. *The reading of emissions are attenuated more than 20 dB below the permissible limits or the field strength is too small to be measured.*
3. *Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB)*
4. *Limit line = specific Limits (dBuV) + Distance extrapolation factor*

TEST RESULTS

Below 1 GHz

Operation Mode: Normal Link

Frequency MHz	Reading dBuV	Ant. Factor dB	Cable Loss dB	ANT POL (H/V)	Total dBuV/m	Limit dBuV/m	Margin dB
59.00	10.82	11.74	1.75	V	24.31	40.0	15.69
115.00	11.37	10.12	2.55	V	24.51	43.5	18.99

Notes:

1. Measuring frequencies from 30 MHz to the 1 GHz.
2. Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Quasi peak detector mode.

Above 1 GHz

Operation Mode: 802.11b (CH.1)

Frequency [MHz]	Level [dBuV]	AF. CL. [dB]	ANT. POL [H/V]	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4824	-112.6	36.70	V	42.3	54	11.7	AV
4824	-116.0	36.70	H	45.7	54	8.3	AV
9648	-110.5	44.06	H	47.6	54	6.4	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Spectrum setting:
 - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
 - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.

Operation Mode: 802.11b (CH 6)

Frequency [MHz]	Level [dBuV]	AF. CL. [dB]	ANT. POL [H/V]	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4873	-112.8	36.90	V	42.72	54	11.3	AV
9748	-106.4	44.32	V	43.75	54	10.3	AV
4874	-116.2	36.90	H	46.10	54	7.90	AV
9748	-108.9	44.32	H	46.24	54	7.76	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
- 4.
5. Spectrum setting:
 - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MHz.
 - b. AV Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 10 Hz.

Operation Mode: CH High

Frequency [MHz]	Level [dBuV]	AF. CL. [dB]	ANT. POL [H/V]	Field Strength [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Detect
4924	-115.4	37.10	V	45.48	54	8.5	AV
9848	-106.3	44.58	V	43.90	54	10.1	AV
4924	-116.9	37.10	H	47.00	54	7.0	AV
9848	-109.6	44.58	H	47.20	54	6.8	AV

Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin > 20dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.
4. Spectrum setting:
 - a. Peak Setting 1 GHz – 26 GHz, RBW = 1 MHz, VBW = 1 MH.
 - b. AV Setting 1 GH z- 26 GHz, RBW = 1 MHz, VBW = 10 Hz.

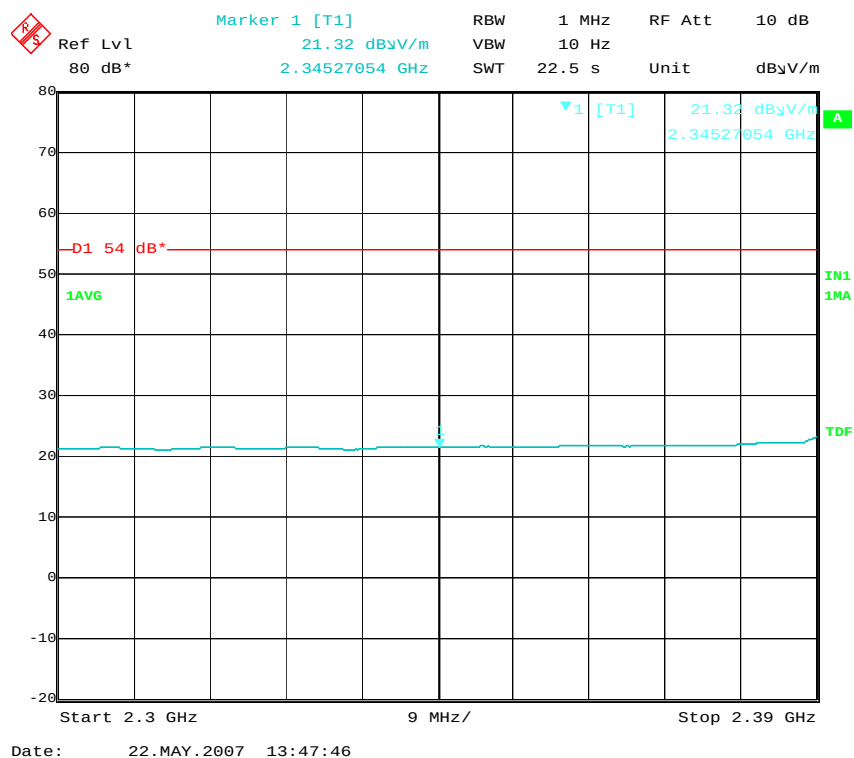
6.6.2 Radiated Restricted Band Measurements

RESULT PLOTS

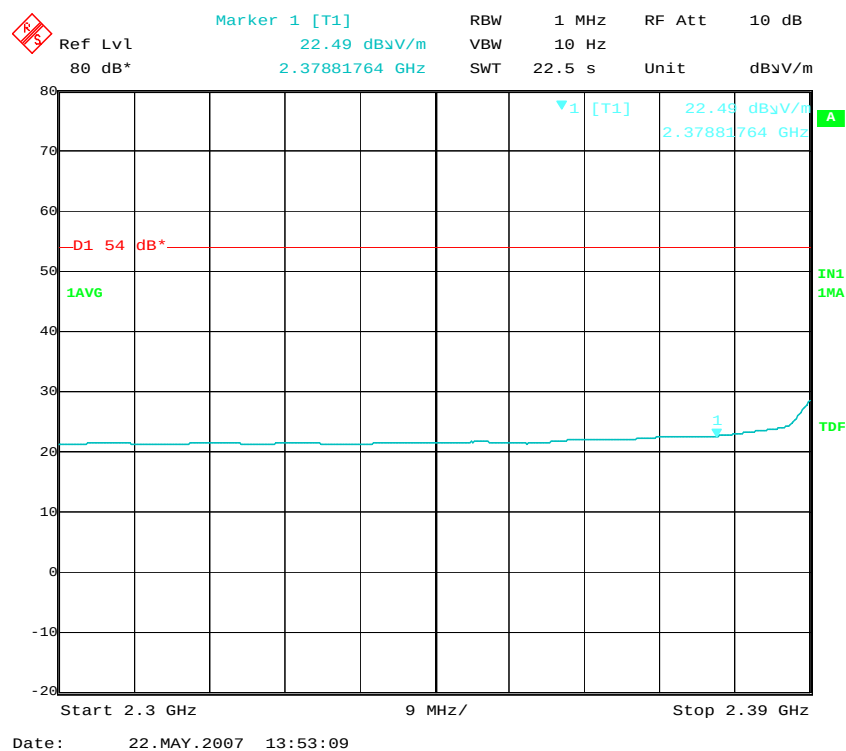
Ch.1 (802.11g)

Detector Mode: Average

Polarity: Horizontal

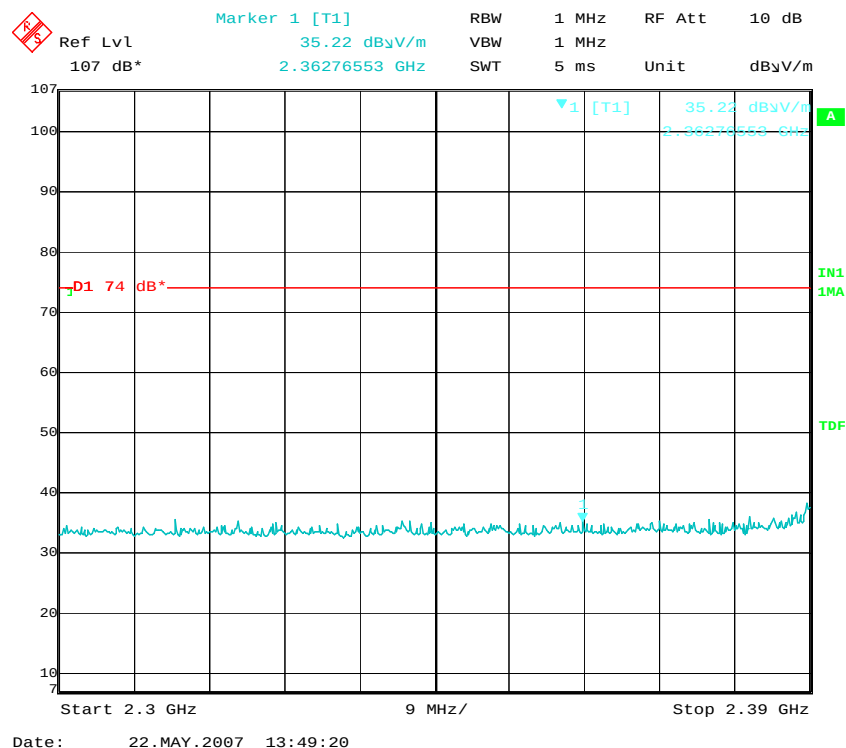


Polarity: Vertical

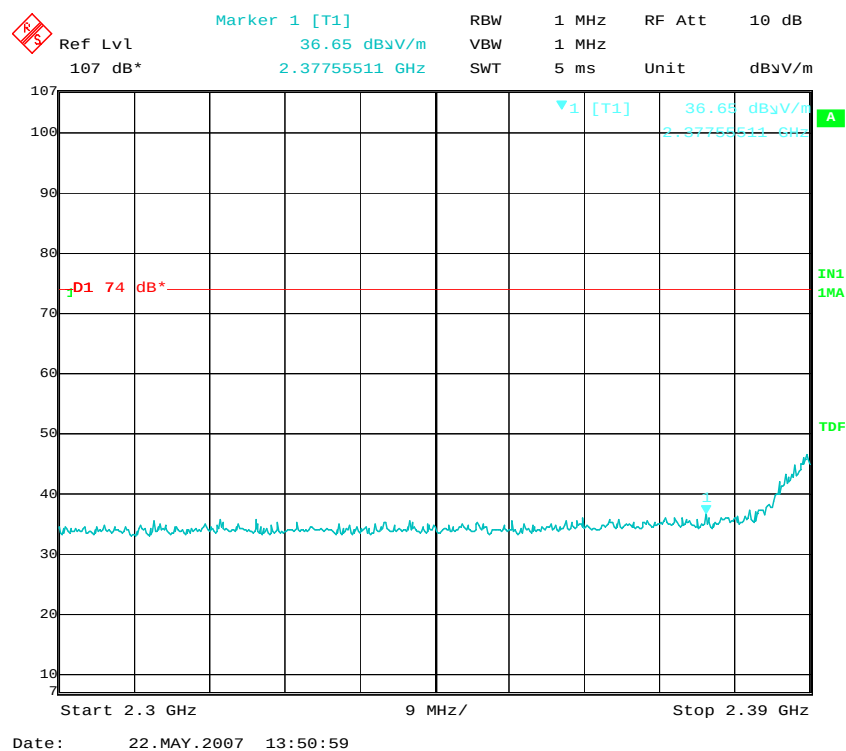


Detector Mode: Peak

Polarity: Horizontal



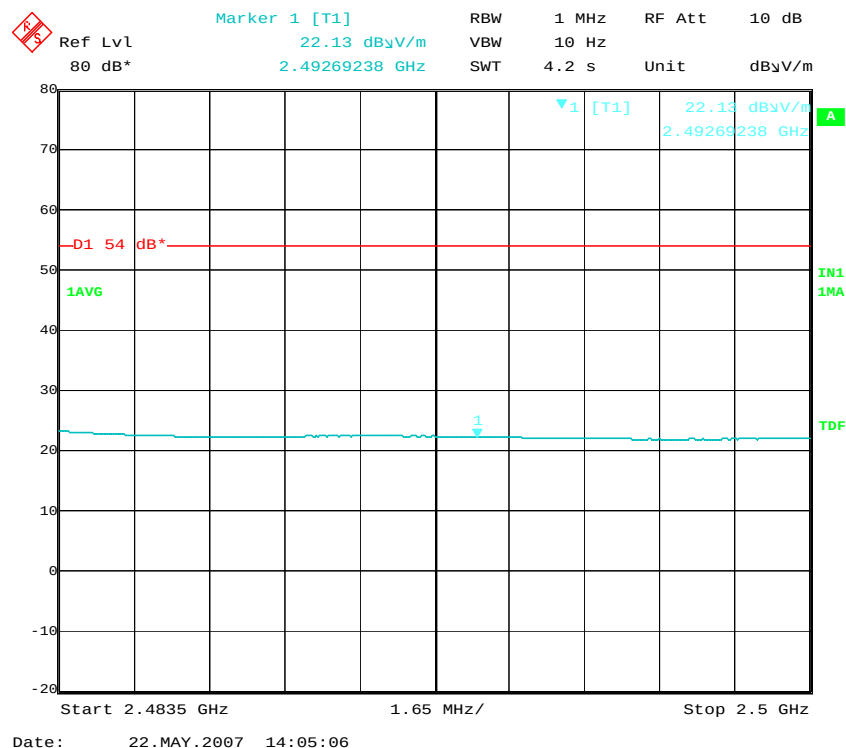
Polarity: Vertical



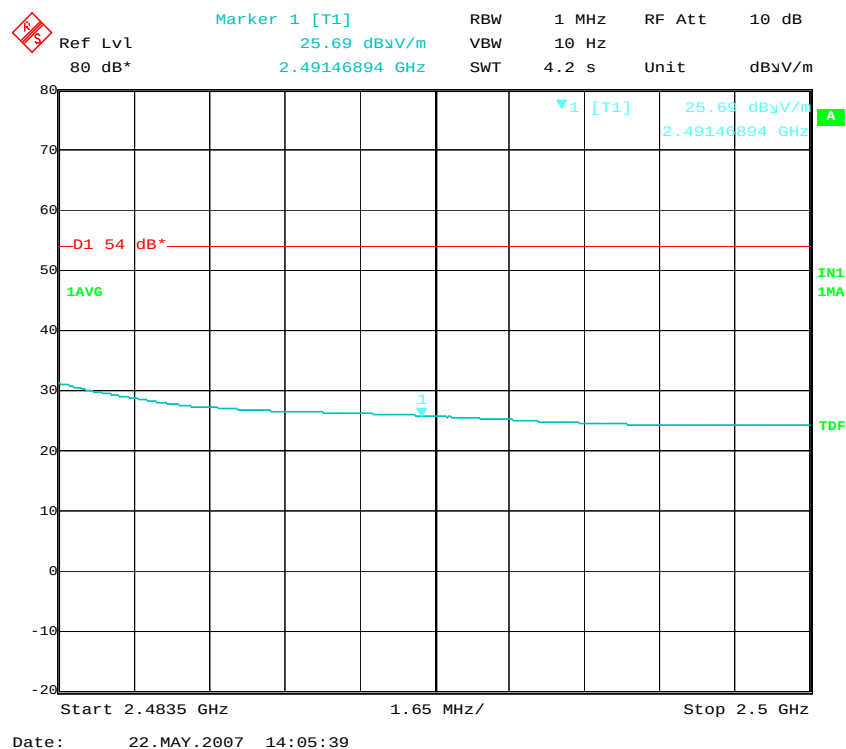
Ch.11 (802.11g)

Detector Mode: Average

Polarity: Horizontal

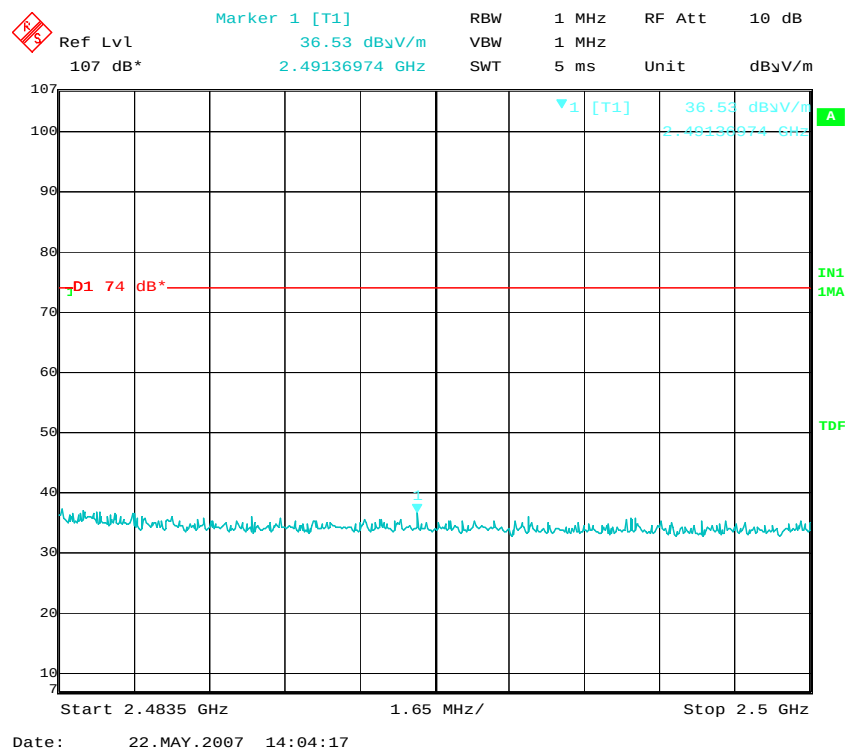


Polarity: Vertical

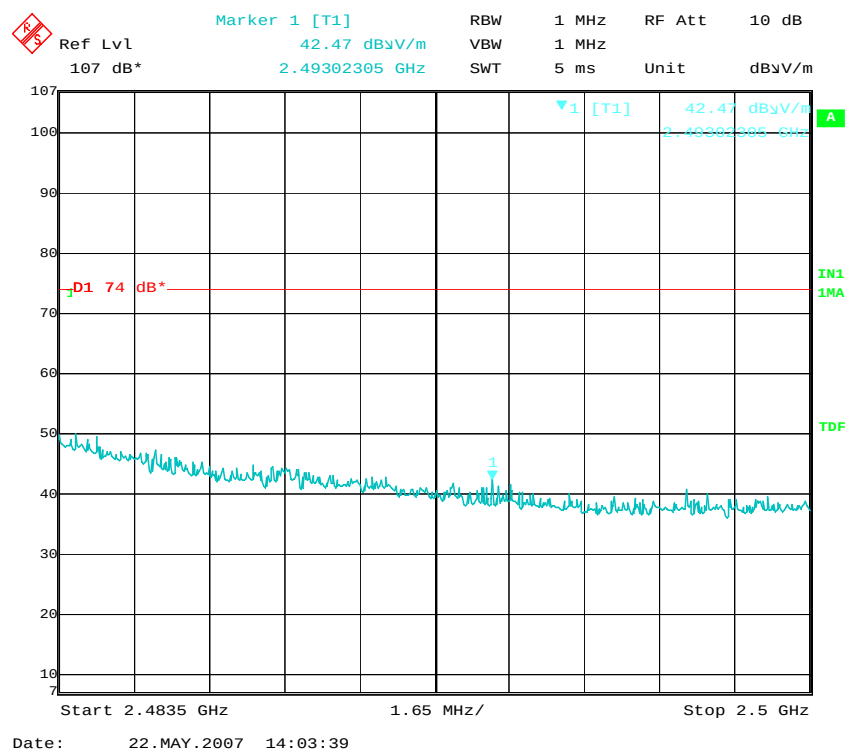


Detector Mode: Peak

Polarity: Horizontal



Polarity: Vertical



6.7 POWERLINE CONDUCTED EMISSIONS

LIMIT

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

Frequency Range (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

TEST PROCEDURE

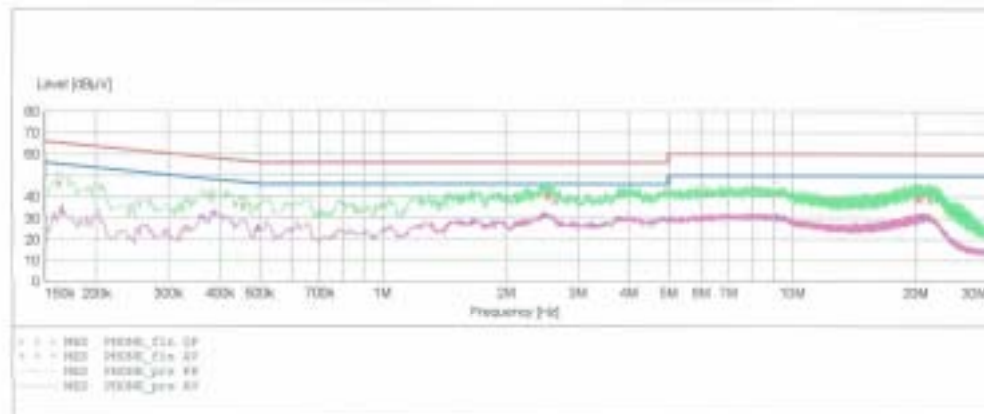
1. The EUT is placed on a wooden table 80 cm above the reference groundplane.
2. The EUT is connected via LISN to a test power supply.
3. The measurement results are obtained as described below:
4. Detectors – Quasi Peak and Average Detector.

■ RESULT PLOTS

EUT: SGR-T409
 Manufacturer: SAMSUNG
 Operating Condition: CAMERA MODE
 Test Site: SHIELD ROOM
 Operator: DH.RYU
 Test Specification: CISPR 22 CLASS B
 Comment: #

SCAN TABLE: "CISPR 22 Voltage"

Short Description:		CISPR 22 Voltage				
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
Frequency	Frequency	Width				
150.1 kHz	500.0 kHz	2.5 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
500.0 kHz	5.0 MHz	5.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			
5.0 MHz	30.0 MHz	5.0 kHz	MaxPeak	10.0 ms	9 kHz	None
			Average			



MEASUREMENT RESULT: "PHONE_fin QP"

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Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Line	PE
0.162600	46.30	10.0	65	19.0	---	---
0.382600	40.20	10.0	58	18.0	---	---
0.455100	36.20	10.1	57	20.6	---	---
2.515000	41.10	10.4	56	14.9	---	---
2.535000	40.40	10.4	56	15.6	---	---
2.630000	38.30	10.4	56	17.7	---	---
20.240000	39.30	12.3	60	20.7	---	---
20.515000	39.90	12.3	60	20.1	---	---
21.665000	38.90	12.4	60	21.1	---	---



MEASUREMENT RESULT: "PHONE_fin AV"

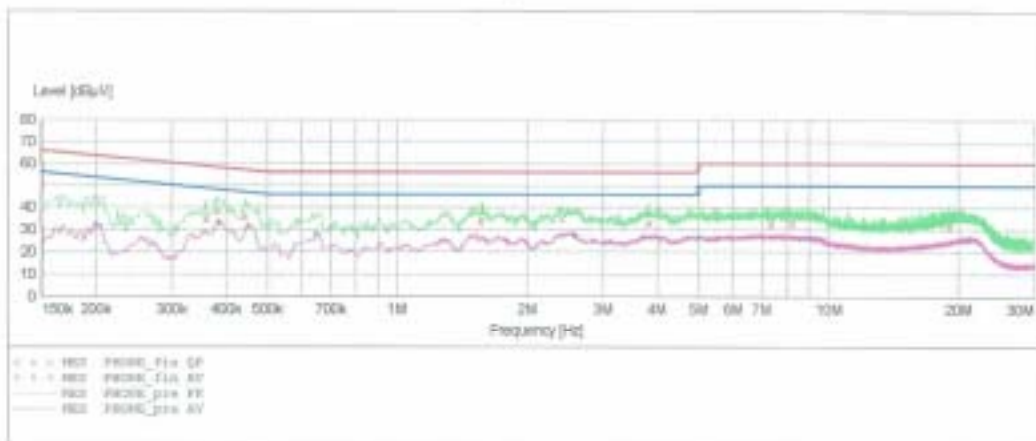
5/18/2007 10:31AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Line	FE
0.165100	33.20	10.0	55	22.0	----	----
0.390100	32.70	10.0	48	15.3	----	----
0.497600	25.70	10.1	46	20.4	----	----
1.660000	28.70	10.2	46	17.3	----	----
2.485000	32.00	10.3	46	14.0	----	----
3.765000	29.70	10.5	46	16.3	----	----
5.000000	29.10	10.6	46	16.9	----	----
9.225000	29.90	11.1	50	20.1	----	----
20.865000	30.60	12.3	50	19.4	----	----

EUT: SGH-T409
 Manufacturer: SAMSUNG
 Operating Condition: CAMERA MODE
 Test Site: SHIELD ROOM
 Operator: DH.RYU
 Test Specification: CISPR 22 CLASS B
 Comment: N

SCAN TABLE: "CISPR 22 Voltage"

Short Description:		CISPR 22 Voltage					
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer	
Frequency	Frequency	Width					
150.1 kHz	500.0 kHz	2.5 kHz	MaxPeak	10.0 ms	9 kHz	None	
			Average				
500.0 kHz	5.0 MHz	5.0 kHz	MaxPeak	10.0 ms	9 kHz	None	
			Average				
5.0 MHz	30.0 MHz	5.0 kHz	MaxPeak	10.0 ms	9 kHz	None	
			Average				



MEASUREMENT RESULT: "PHONE_fin QP"

5/18/2007 10:34AM

Frequency MHz	Level dBuV	Transd dB	Limit dBuV	Margin dB	Line	PE
0.360100	35.20	10.0	59	23.6	---	---
0.382600	38.90	10.0	58	19.3	---	---
0.442600	36.30	10.0	57	20.7	---	---
1.565000	34.40	10.2	56	21.6	---	---
2.405000	35.50	10.3	56	20.5	---	---
3.830000	33.40	10.5	56	22.6	---	---
7.335000	33.10	10.9	60	26.9	---	---
8.200000	33.30	11.0	60	26.7	---	---
19.065000	31.60	12.2	60	28.4	---	---



MEASUREMENT RESULT: "PHONE fin AV"

5/18/2007 10:34AM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Line	FE
0.200100	32.70	10.0	54	20.9	---	---
0.385100	33.20	10.0	48	15.0	---	---
0.452600	31.50	10.1	47	15.3	---	---
0.650000	28.30	10.1	46	17.7	---	---
2.565000	27.70	10.4	46	18.3	---	---
3.738000	26.80	10.5	46	19.2	---	---
5.000000	26.40	10.6	46	19.6	---	---
9.130000	26.10	11.1	50	23.9	---	---
21.270000	25.80	12.4	50	24.2	---	---

7. LIST OF TEST EQUIPMENT

Name of Equipment	Model	Serial No.	Due Date
Spectrum Analyzer	ESI26	836119/010	2007-10-01
	E4440(3Hz~26.5GHz)	MY41000236	2008-04-14
	ESCI	100033	2007-08-24
Pre-Amplifier	8449B	3008A00691	2008-01-02
Antenna Master	MA0001	ANT0967	Not Required
Controller	HD100	100/756	Not Required
Horn Antenna	HF906	100134	2008-05-03
VULB 9160	TRILOG Antenna	9160-3150	2008-04-20
High Pass Filter	WHK/3.5/18G-10SS	3	Not Required
	WHK/3.5/18G-10SS	4	Not Required
Spectrum Analyzer	R3273	J004821	2008-05-02
Shielded	RF0002	ANT0001	Not Required
Power Meter	E4419B	GB41293846	2007-09-06
Power sensor	8481B	3318A10325	2007-09-24
Power sensor	8485A	3318A19924	2007-09-24
Network Analyzer	8753E	JP38160590	2007-06-26
Power Supply	E3640A	MY40003594	2007-06-28
LISN	ESH2-Z5	861741/013	2008-04-20
LISN	ESH3-Z6	837950/023	2008-03-16
PULSE LIMITER	ESH3-Z2	375.8810.352	2008-03-16
Loop Antenna	HFH2-Z2	881056/070	2008-01-10
EMC Standard Analyzer	E7405A	US40240209	2007-10-02
Attenuator	2	BR0554	2008-01-24