

FCC RADIO TEST REPORT

according to

47 CFR FCC Part 15 Subpart C § 15.247

Equipment	: MelodyWing SP
Model No.	: SST18SC03
Brand Name	: SST
Filing Type	: New Application
Applicant	: Silicon Storage Technology, Inc. 16F-6, No. 75, Sec. 1, Sintai 5th Rd., Sijhih City, Taipei County 22101
FCC ID	: VN8SST18SC03A
Manufacturer	: Silicon Storage Technology, Inc. 16F-6, No. 75, Sec. 1, Sintai 5th Rd., Sijhih City, Taipei County 22101
Received Date	: Sep. 12, 2008
Final Test Date	: Oct. 27, 2008

Statement

Test result included is only for the 2.4G Band part and 5G Band (5725 ~ 5850MHz) of the product.

The test result in this report refers exclusively to the presented test model / sample.

Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

The measurements and test results shown in this test report were made in accordance with the procedures and found in compliance with the limit given in **ANSI C63.4-2003** and **47 CFR FCC Part 15 Subpart C**.

The test equipment used to perform the test is calibrated and traceable to NML/ROC.



SPORTON International Inc.

6F, No. 106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

Table of Contents

1 SUMMARY OF THE TEST RESULT	2
2 GENERAL INFORMATION.....	3
2.1 Product Details	3
2.2 Table for Filed Antenna	3
2.3 Table for Carrier Frequencies	3
2.4 Table for Test Modes	4
2.5 Table for Testing Locations	4
2.6 Table for Supporting Units.....	4
2.7 Table for Parameters of Test Software Setting	5
2.8 EUT Operation during Test	5
2.9 Test Configuration	6
3 TEST RESULT	8
3.1 AC Power Line Conducted Emissions Measurement.....	8
3.2 Maximum Peak Output Power Measurement.....	12
3.3 Power Spectral Density Measurement.....	14
3.4 6dB Spectrum Bandwidth Measurement.....	20
3.5 Radiated Emissions Measurement.....	26
3.6 Band Edge and Fundamental Emissions Measurement	72
3.7 Antenna Requirements.....	78
4 LIST OF MEASURING EQUIPMENTS	79
5 TEST LOCATION.....	81
6 TAF CERTIFICATE OF ACCREDITATION	82
APPENDIX A. MAXIMUM PERMISSIBLE EXPOSURE.....	A1 ~ A3
APPENDIX B. TEST PHOTOS	B1 ~ B15
APPENDIX C. PHOTOGRAPHS OF EUT	C1 ~ C13

History of This Test Report

Original Issue Date: Oct. 30, 2008

Report No.: FR891209AB

■ No additional attachment.

□ Additional attachment were issued as following record:

Attachment No.	Issue Date	Description

CERTIFICATE OF COMPLIANCE

according to

47 CFR FCC Part 15 Subpart C § 15.247

Equipment : MelodyWing SP

Model No. : SST18SC03

Brand Name : SST

Applicant : Silicon Storage Technology, Inc.
16F-6, No. 75, Sec. 1, Sintai 5th Rd., Sijhih
City, Taipei County 22101

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Sep. 12, 2008 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.



Wayne Hsu

SPORTON International Inc.

6F, No.106, Sec. 1, Hsin Tai Wu Rd., Hsi Chih, Taipei Hsien, Taiwan, R.O.C.

1 SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart C				
Part	Rule Section	Description of Test	Result	Under Limit
3.1	15.207	AC Power Line Conducted Emissions	Complies	3.45 dB
3.2	15.247(b)(3)	Maximum Peak Conducted Output Power	Complies	12.66 dB
3.3	15.247(e)	Power Spectral Density	Complies	0.37 dB
3.4	15.247(a)(2)	6dB Spectrum Bandwidth	Complies	-
3.5	15.247(d)	Radiated Emissions	Complies	0.22 dB
3.6	15.247(d)	Band Edge Emissions	Complies	1.46 dB
3.7	15.203	Antenna Requirements	Complies	-

Test Items	Uncertainty	Remark
AC Power Line Conducted Emissions	±2.3dB	Confidence levels of 95%
Maximum Peak Conducted Output Power	±0.8dB	Confidence levels of 95%
Power Spectral Density	±0.5dB	Confidence levels of 95%
6dB Spectrum Bandwidth	±8.5×10 ⁻⁸	Confidence levels of 95%
Radiated Emissions (9kHz~30MHz)	±0.8dB	Confidence levels of 95%
Radiated Emissions (30MHz~1000MHz)	±1.9dB	Confidence levels of 95%
Radiated / Band Edge Emissions (1GHz~18GHz)	±1.9dB	Confidence levels of 95%
Radiated Emissions (18GHz~40GHz)	±1.9dB	Confidence levels of 95%
Temperature	±0.7	Confidence levels of 95%
Humidity	±3.2%	Confidence levels of 95%
DC / AC Power Source	±1.4%	Confidence levels of 95%

2 GENERAL INFORMATION

2.1 Product Details

Only the radio detail of 2.4G and 5G Band (5725 ~ 5850MHz) is shown in the table below. For more detailed features description, please refer to the manufacturer's specifications or user's manual.

Items	Description
Power Type	5V DC Power
Data Modulation	DSSS (CCK)
Data Rate (Mbps)	DSSS (11)
Frequency Range	2400 ~ 2483.5MHz / 5725 ~ 5850MHz
Channel Number	2.4G Band : 11 ; 5G Band : 5
Channel Band Width (99%)	2.4G Band : 13.48 MHz ; 5G Band : 10.40 MHz
Conducted Output Power	2.4G Band : 17.34 dBm ; 5G Band : 14.01 dBm

2.2 Table for Filed Antenna

Ant.	Antenna Type	Connector	For 2.4G Ant. Gain (dBi)	For 5G Ant. Gain (dBi)
1	Dipole Ant. (Black)	I-PEX	5.20	3.30
2	Dipole Ant. (White)	I-PEX	2.00	2.00
3	Chip Ant.	I-PEX	1.93	3.56

Note: EUT has the TX diversity function for the dipole (1), (2) and chip (3) antenna. Investigation has been done on the entire possible Configuration for TX diversity function.

2.3 Table for Carrier Frequencies

For 2.4GHz Frequency Band

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
2400~2483.5MHz	1	2417 MHz	7	2435 MHz
	2	2419 MHz	8	2443 MHz
	3	2421 MHz	9	2451 MHz
	4	2423 MHz	10	2459 MHz
	5	2425 MHz	11	2467 MHz
	6	2427 MHz		

Note: A carrier frequency is 2 MHz per a channel use Channel 1~Channel 6 and Channel 6~Channel 11 carrier frequency is 8 MHz.

For 5GHz Frequency Band

Frequency Band	Channel No.	Frequency
5725~5850 MHz Band 4	149	5745 MHz
	153	5765 MHz
	157	5785 MHz
	161	5805 MHz
	165	5825 MHz

2.4 Table for Test Modes

Preliminary tests were performed in different data rate to find the worst radiated emission. The data rate shown in the table below is the worst-case rate with respect to the specific test item. Investigation has been done on all the possible Configuration for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode	Data Rate	Channel
AC Power Line Conducted Emissions	Adapter Mode	Auto	-
Max. Peak Conducted Output Power	2.4G Band/CCK	11 Mbps	1/6/11
Power Spectral Density	5G Band/CCK	11 Mbps	149/157/165
6dB Spectrum Bandwidth			
Radiated Emissions Below 1GHz	See the Note	Auto	-
Radiated Emissions Above 1GHz	2.4G Band/CCK	11 Mbps	1/6/11
Band Edge Emissions	5G Band/CCK	11 Mbps	149/157/165
Band Edge and Fundamental	2.4G Band/CCK	11 Mbps	1/6/11
	5G Band/CCK	11 Mbps	149/157/165

Note: The Radiated Emissions tested is following dipole (1), (2) and chip (3) antenna modes were tested.

2.5 Table for Testing Locations

Test Site No.	Site Category	Location	FCC Reg. No.	IC File No.	VCCI Reg. No
03CH02-HY	SAC	Hwa Ya	101377	IC 4086B-1	-
CO01-HY	Conduction	Hwa Ya	101377	IC 4086B-1	-
TH01-HY	OVEN Room	Hwa Ya	-	-	-

Open Area Test Site (OATS); Semi Anechoic Chamber (SAC); Fully Anechoic Chamber (FAC).

2.6 Table for Supporting Units

Support Unit	Brand	Model	FCC ID
Notebook	DELL	D400	DoC
MelodyWing SP (Remote Workstation)	SST	SST18SC03	N/A
AP (Remote Workstation)	D-Link	DNS-G120	DoC
Test Fixture	-	-	-

2.7 Table for Parameters of Test Software Setting

During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Power Parameters of 2.4G Band

Test Software Version	Terminal V1.9b		
Frequency	2417 MHz	2427 MHz	2467 MHz
2.4G Band	Default	Default	Default

Power Parameters of 5G Band

Test Software Version	Terminal V1.9b		
Frequency	5745 MHz	5785 MHz	5825 MHz
5G Band	Default	Default	Default

2.8 EUT Operation during Test

<Conduction>

During the test, the following programs under WIN XP were executed:

Executed "ping.exe" to link with the remote workstation to receive and transmit data by LAN and WLAN.

<Radiation>

An executive program, EMCTEST.EXE under WIN XP, which generates a complete line of continuously repeating "H" pattern was used as the test software.

The program was executed as follows:

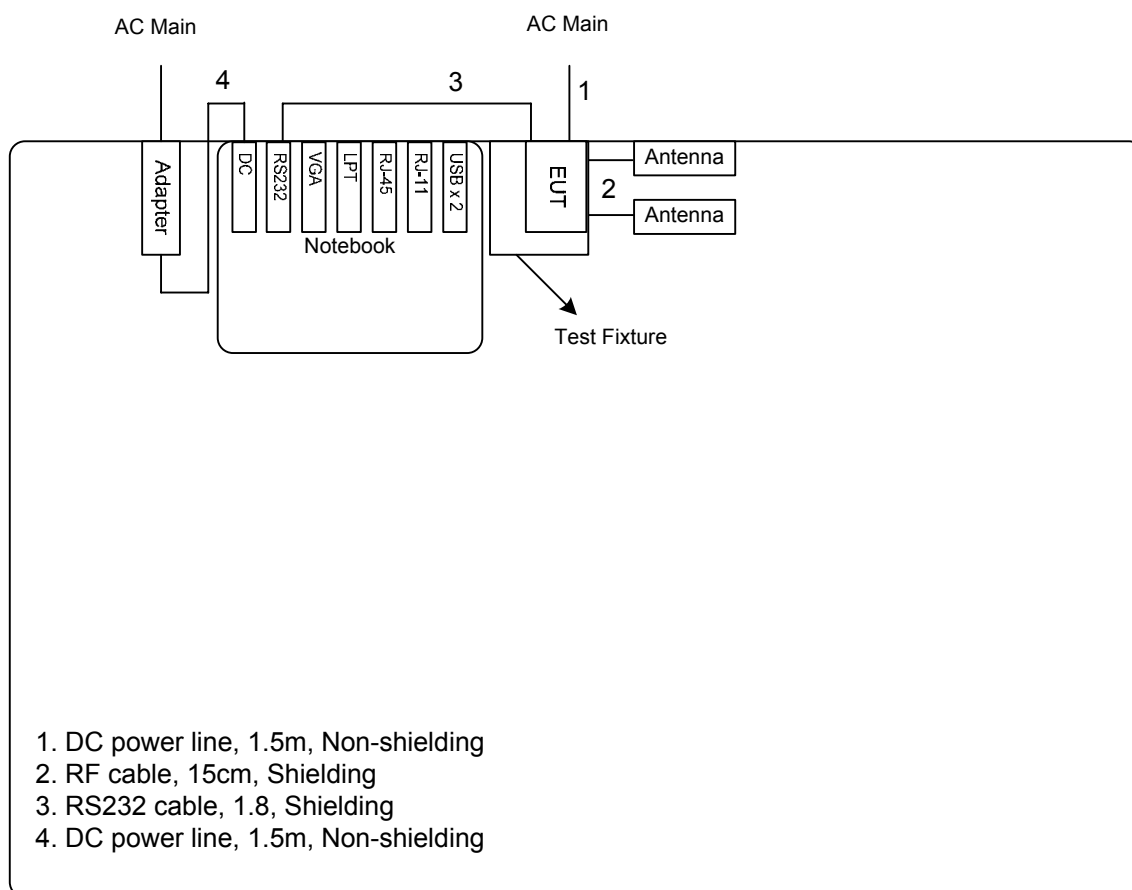
The NB sends "H" messages to the panel, and the panel displays "H" patterns on the screen.

Executed "Terminal V1.9b" to link with the EUT to receive and transmit data by WLAN.

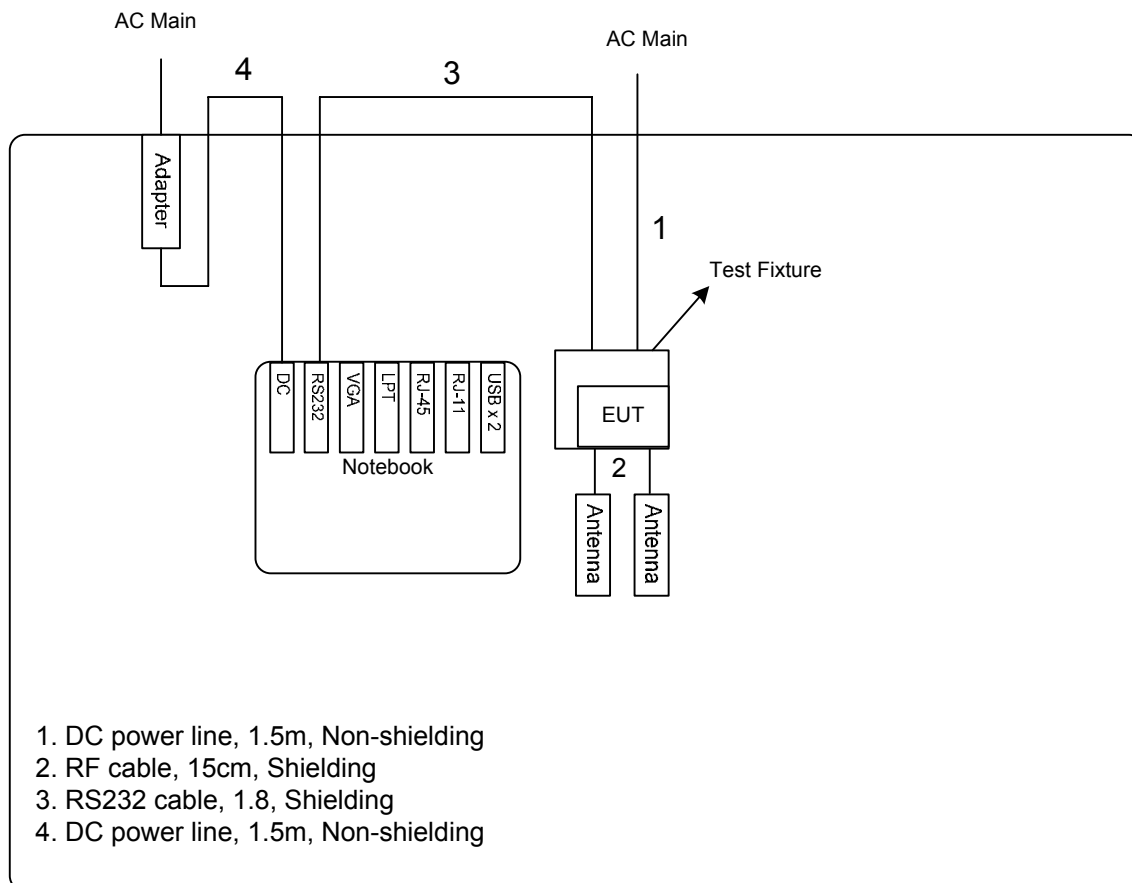
2.9 Test Configuration

2.9.1 Radiation Emissions Test Configuration

For radiated emissions 9kHz~1GHz



For radiated emissions above 1GHz



3 TEST RESULT

3.1 AC Power Line Conducted Emissions Measurement

3.1.1 Limit

For this product which is designed to be connected to the 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 below limits table.

Class B

Frequency (MHz)	QP Limit (dBuV)	AV Limit (dBuV)
0.15~0.5	66~56	56~46
0.5~5	56	46
5~30	60	50

3.1.2 Measuring Instruments and Setting

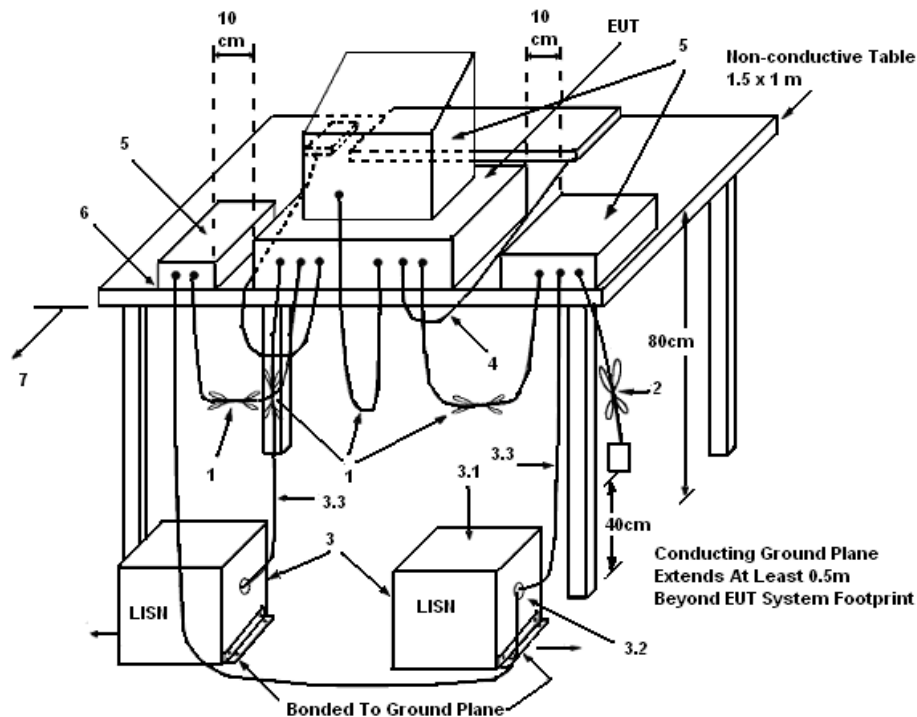
Please refer to section 4 of equipments list in this report. The following table is the setting of the receiver.

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

3.1.3 Test Procedures

1. Configure the EUT according to ANSI C63.4. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 KHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

3.1.4 Test Setup Layout



LEGEND:

- (1) Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- (2) I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- (3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω . LISN can be placed on top of, or immediately beneath, reference ground plane.
- (3.1) All other equipment powered from additional LISN(s).
- (3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.
- (3.3) LISN at least 80 cm from nearest part of EUT chassis.
- (4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.
- (5) Non-EUT components of EUT system being tested.
- (6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.
- (7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

3.1.5 Test Deviation

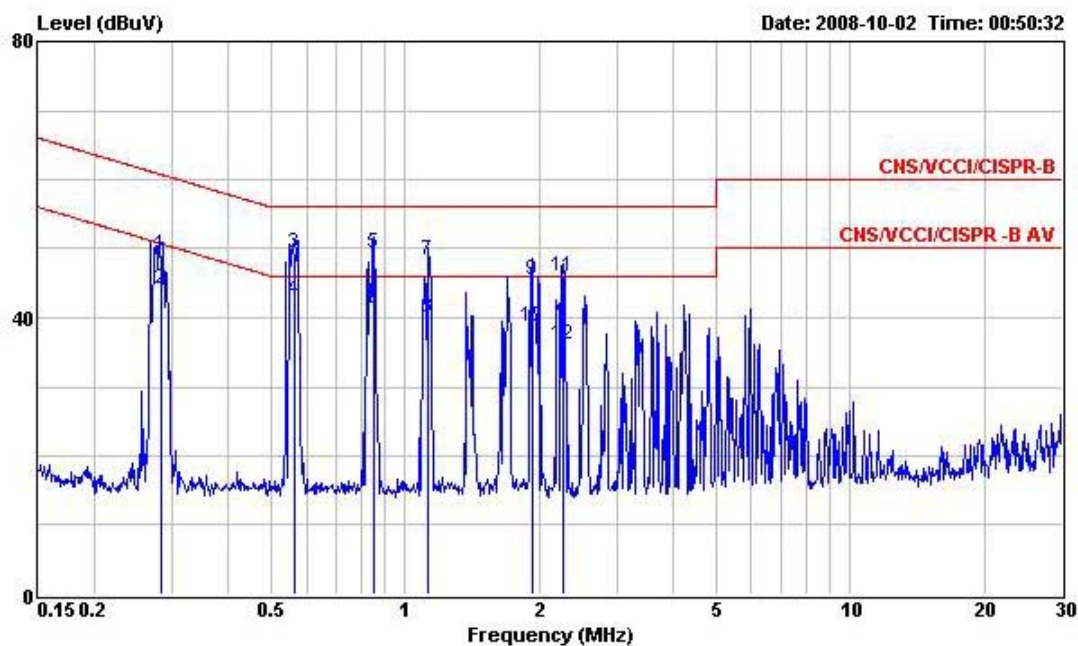
There is no deviation with the original standard.

3.1.6 EUT Operation during Test

The EUT was placed on the test table and programmed in normal function.

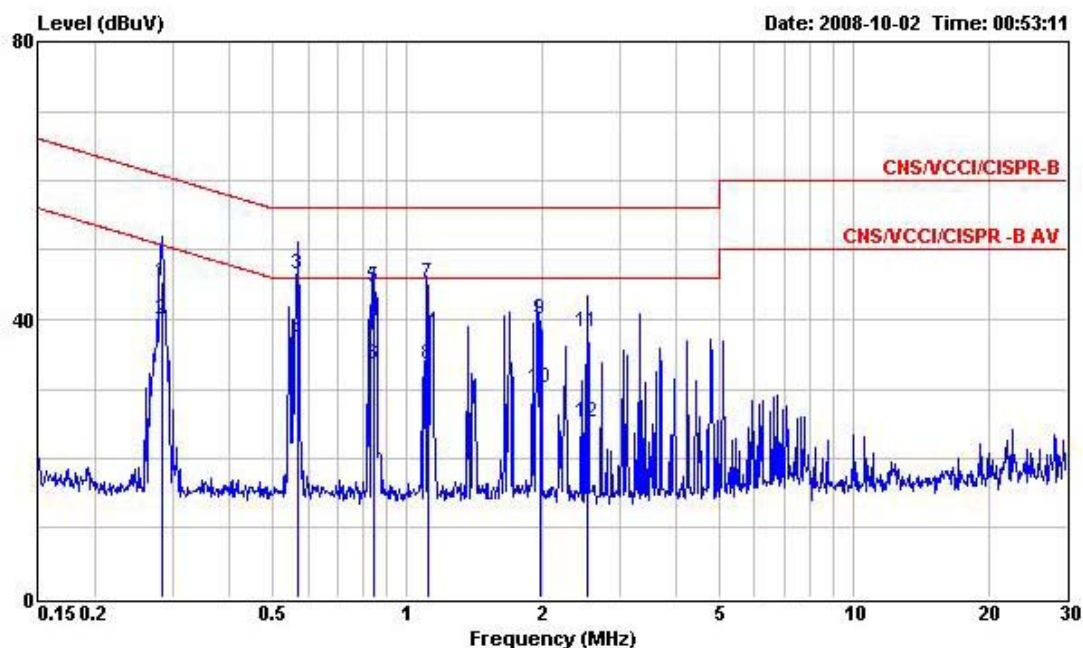
3.1.7 Results of AC Power Line Conducted Emissions Measurement

Test date	Oct. 02, 2008	Test Site No.	CO01-HY
Temperature	23	Humidity	63%
Test Engineer	Steven	Phase	Line
Configuration	Adapter Mode		



	Freq	Level	Over	Limit	Read	Probe	Cable	
	MHz	dBuV	Limit	Line	Level	Factor	Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.283	49.22	-11.51	60.73	49.06	0.09	0.07	QP
2	0.283	44.03	-6.70	50.73	43.87	0.09	0.07	Average
3	0.563	49.24	-6.76	56.00	49.07	0.10	0.07	QP
4	0.563	42.54	-3.46	46.00	42.37	0.10	0.07	Average
5	0.848	49.46	-6.54	56.00	49.26	0.11	0.09	QP
6	0.848	41.27	-4.73	46.00	41.07	0.11	0.09	Average
7	1.130	48.22	-7.78	56.00	47.99	0.12	0.11	QP
8	1.130	39.93	-6.07	46.00	39.70	0.12	0.11	Average
9	1.930	45.48	-10.52	56.00	45.18	0.14	0.16	QP
10	1.930	38.81	-7.19	46.00	38.51	0.14	0.16	Average
11	2.260	45.88	-10.12	56.00	45.58	0.15	0.15	QP
12	2.260	36.06	-9.94	46.00	35.76	0.15	0.15	Average

Test date	Oct. 02, 2008	Test Site No.	CO01-HY
Temperature	23	Humidity	63%
Test Engineer	Steven	Phase	Neutral
Configuration	Adapter Mode		



	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.282	45.37	-15.39	60.76	45.22	0.07	0.08	QP
2	0.282	39.98	-10.78	50.76	39.83	0.07	0.08	Average
3	0.567	46.51	-9.49	56.00	46.35	0.08	0.08	QP
4	0.567	36.85	-9.15	46.00	36.69	0.08	0.08	Average
5	0.844	44.68	-11.32	56.00	44.50	0.09	0.09	QP
6	0.844	33.48	-12.52	46.00	33.30	0.09	0.09	Average
7	1.110	45.14	-10.86	56.00	44.94	0.09	0.11	QP
8	1.110	33.42	-12.58	46.00	33.22	0.09	0.11	Average
9	1.980	40.13	-15.87	56.00	39.86	0.11	0.16	QP
10	1.980	30.13	-15.87	46.00	29.86	0.11	0.16	Average
11	2.540	38.18	-17.82	56.00	37.91	0.12	0.15	QP
12	2.540	25.32	-20.68	46.00	25.05	0.12	0.15	Average

Note:

Level = Read Level + LISN Factor + Cable Loss

3.2 Maximum Peak Output Power Measurement

3.2.1 Limit

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. The limited has to be reduced by the amount in dB that the gain of the antenna exceeds 6dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi. Systems operating in the 5725-5850 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted output power.

3.2.2 Measuring Instruments and Setting

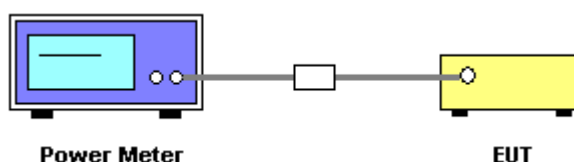
Please refer to section 4 of equipments list in this report. The following table is the setting of the power meter.

Power Meter Parameter	Setting
Filter No.	Auto
Measurement time	0.135 s ~ 26 s
Used Peak Sensor	NRV-Z32 (model 04)

3.2.3 Test Procedures

1. The transmitter output (antenna port) was connected to the power meter.
2. Turn on the EUT and power meter and then record the peak power value.
3. Repeat above procedures on all channels needed to be tested.

3.2.4 Test Setup Layout



3.2.5 Test Deviation

There is no deviation with the original standard.

3.2.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.2.7 Test Result of Maximum Peak Output Power

Test date	Oct. 27, 2008	Test Site No.	TH01-HY
Temperature	28	Humidity	58%
Test Engineer	Tom	Configuration	2.4G / 5G Band

Configuration 2.4G Band

Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
2417 MHz	15.16	30.00	Complies
2427 MHz	17.34	30.00	Complies
2467 MHz	14.38	30.00	Complies

Configuration 5G Band

Frequency	Conducted Power (dBm)	Max. Limit (dBm)	Result
5745 MHz	14.01	30.00	Complies
5785 MHz	12.38	30.00	Complies
5825 MHz	10.54	30.00	Complies

3.3 Power Spectral Density Measurement

3.3.1 Limit

For digitally modulated systems, the 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.

3.3.2 Measuring Instruments and Setting

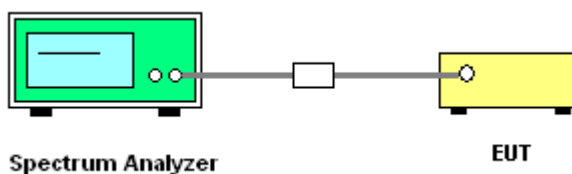
Please refer to section 4 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	1.5MHz
RB	3 kHz
VB	30 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	500s

3.3.3 Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyser.
2. Set RBW of spectrum analyzer to 3kHz and VBW to 30kHz. Set Detector to Peak, Trace to Max Hold.
3. Mark the frequency with maximum peak power as the center of the display of the spectrum.
4. Set the span to 1.5MHz and the sweep time to 500s and record the maximum peak value.

3.3.4 Test Setup Layout



3.3.5 Test Deviation

There is no deviation with the original standard.

3.3.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.3.7 Test Result of Power Spectral Density

Test date	Oct. 27, 2008	Test Site No.	TH01-HY
Temperature	28	Humidity	58%
Test Engineer	Tom	Configuration	2.4G / 5G Band

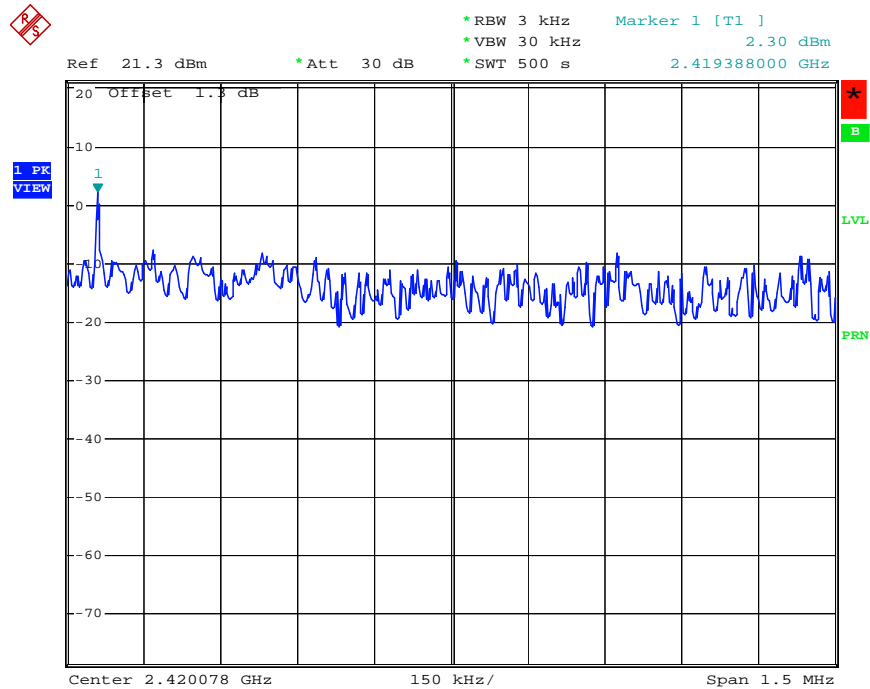
Configuration 2.4G Band

Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
2417 MHz	2.30	8.00	Complies
2427 MHz	7.62	8.00	Complies
2467 MHz	1.29	8.00	Complies

Configuration 5G Band

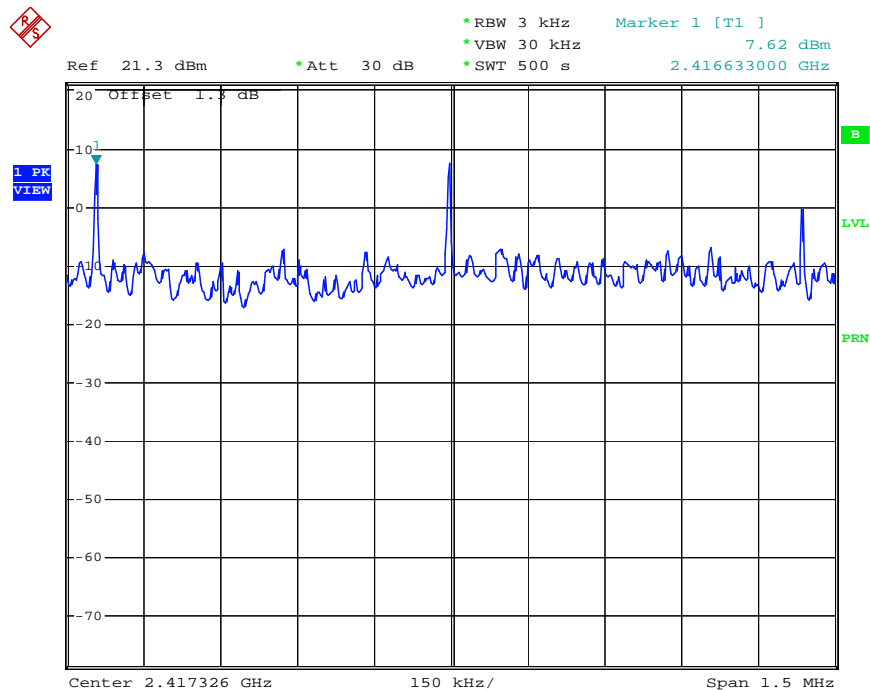
Frequency	Power Density (dBm)	Max. Limit (dBm)	Result
5745 MHz	3.23	8.00	Complies
5785 MHz	0.00	8.00	Complies
5825 MHz	4.03	8.00	Complies

Power Density Plot on Configuration 2.4G Band / 2417 MHz



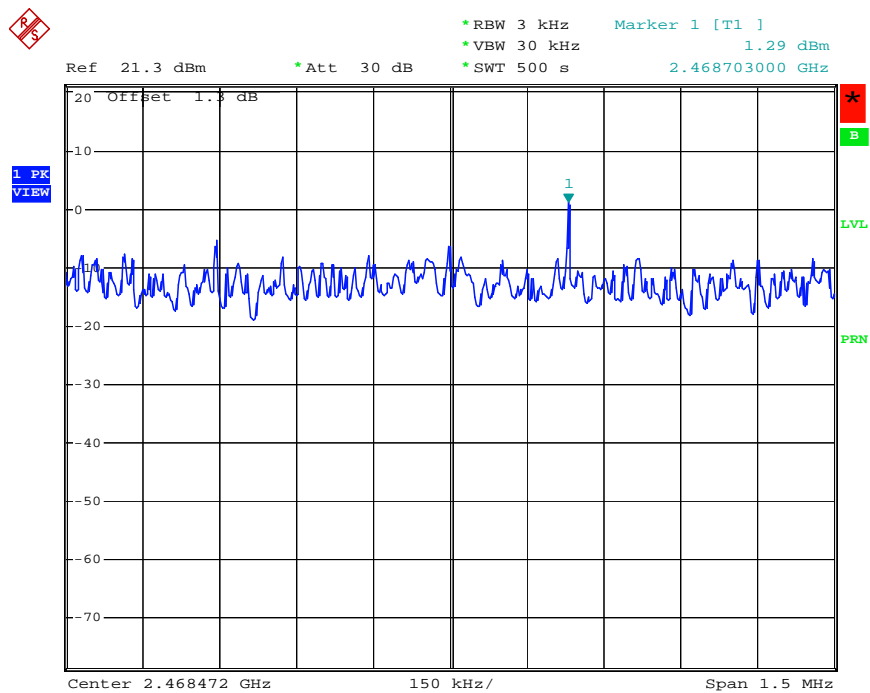
Date: 27.OCT.2008 14:31:49

Power Density Plot on Configuration 2.4G Band / 2427 MHz



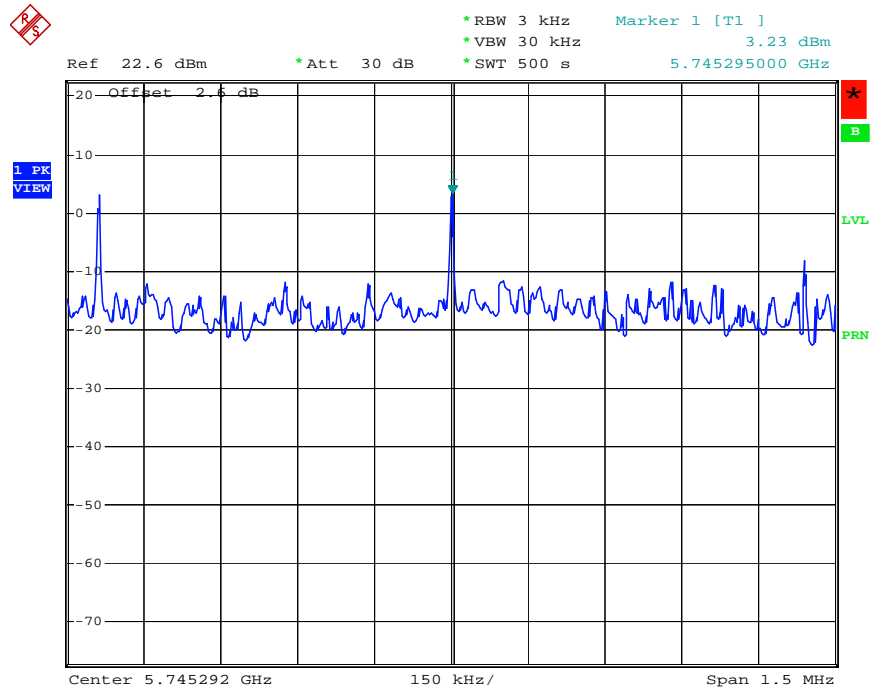
Date: 27.OCT.2008 14:12:22

Power Density Plot on Configuration 2.4G Band / 2467 MHz



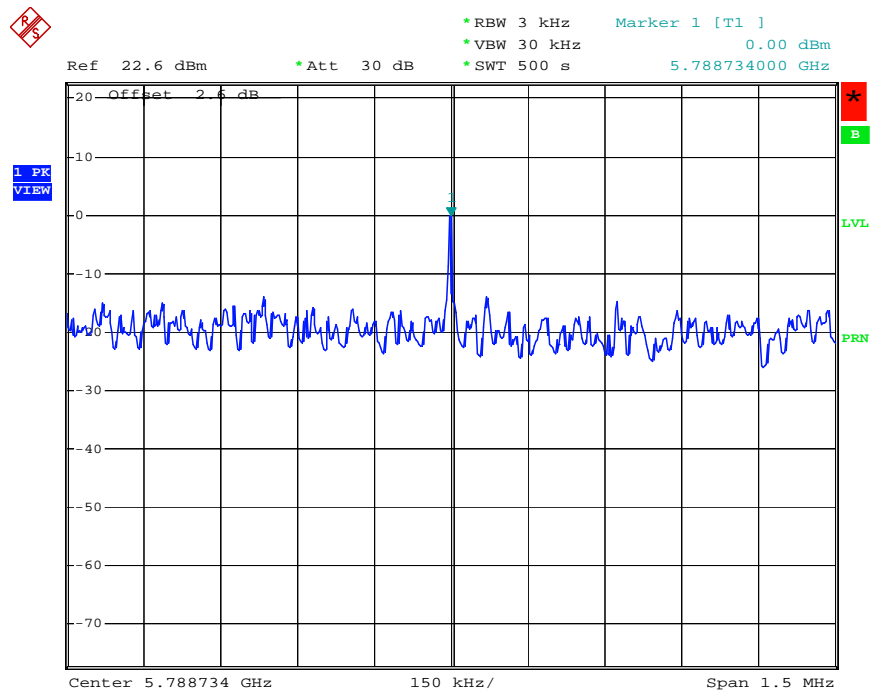
Date: 27.OCT.2008 13:46:22

Power Density Plot on Configuration 5G Band / 5745 MHz



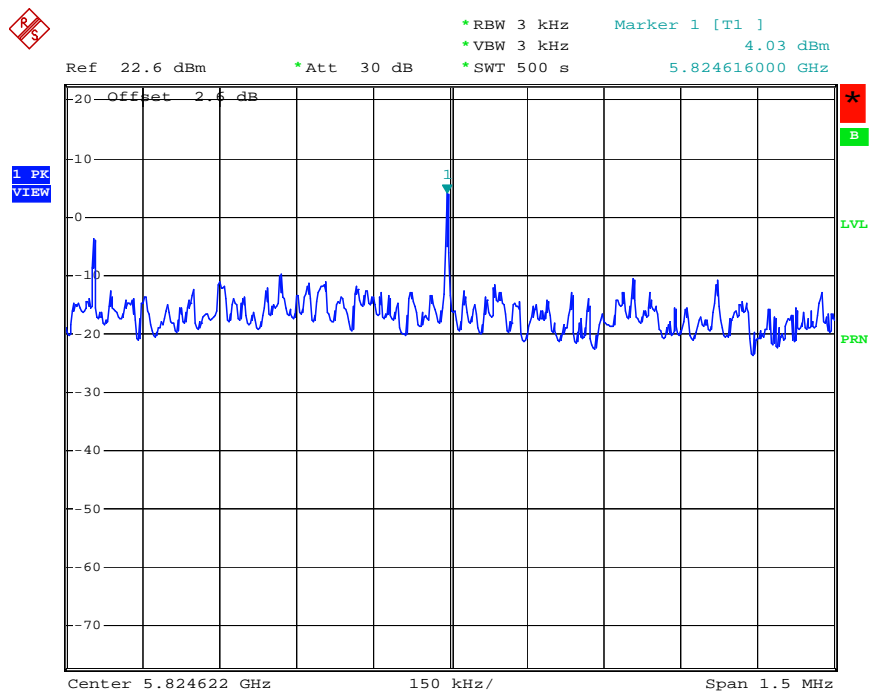
Date: 27.OCT.2008 15:05:48

Power Density Plot on Configuration 5G Band / 5785 MHz



Date: 27.OCT.2008 15:43:41

Power Density Plot on Configuration 5G Band / 5825 MHz



Date: 27.OCT.2008 15:38:07

3.4 6dB Spectrum Bandwidth Measurement

3.4.1 Limit

For digital modulation systems, the minimum 6dB bandwidth shall be at least 500 kHz.

3.4.2 Measuring Instruments and Setting

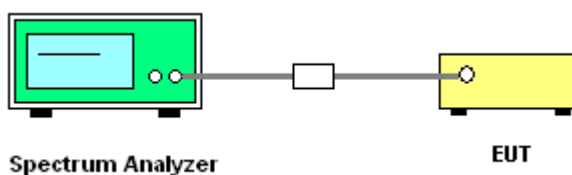
Please refer to section 4 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> 6dB Bandwidth
RB	100 kHz
VB	100 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

3.4.3 Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyser in peak hold mode.
2. The resolution bandwidth of 100 kHz and the video bandwidth of 100 kHz were used.
3. Measured the spectrum width with power higher than 6dB below carrier.

3.4.4 Test Setup Layout



3.4.5 Test Deviation

There is no deviation with the original standard.

3.4.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.4.7 Test Result of 6dB Spectrum Bandwidth

Test date	Oct. 27, 2008	Test Site No.	TH01-HY
Temperature	28	Humidity	58%
Test Engineer	Tom	Configuration	2.4G / 5G Band

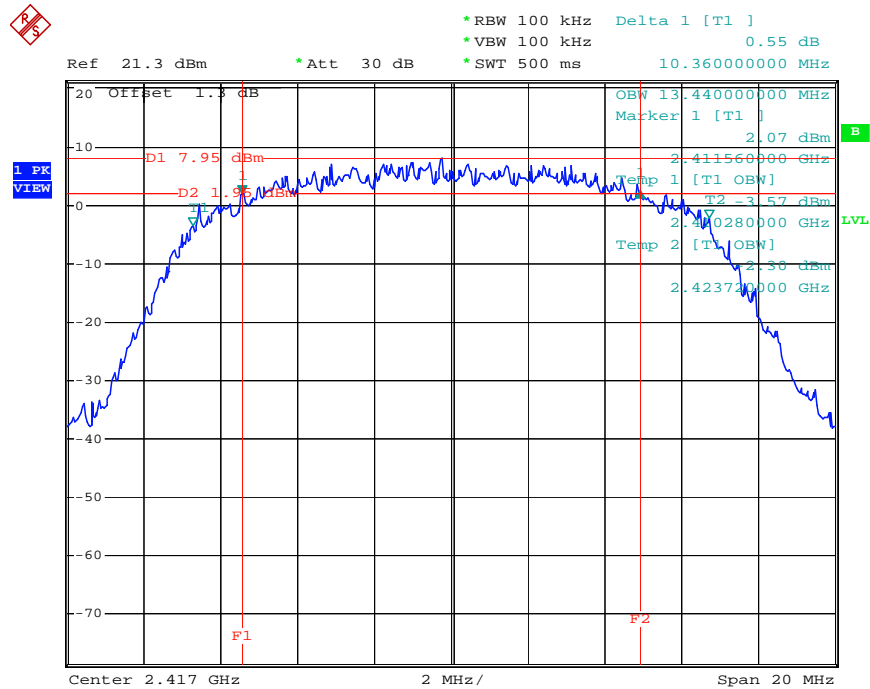
Configuration 2.4G Band

Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
2417 MHz	10.36	13.44	500	Complies
2427 MHz	10.00	13.44	500	Complies
2467 MHz	10.36	13.48	500	Complies

Configuration 5G Band

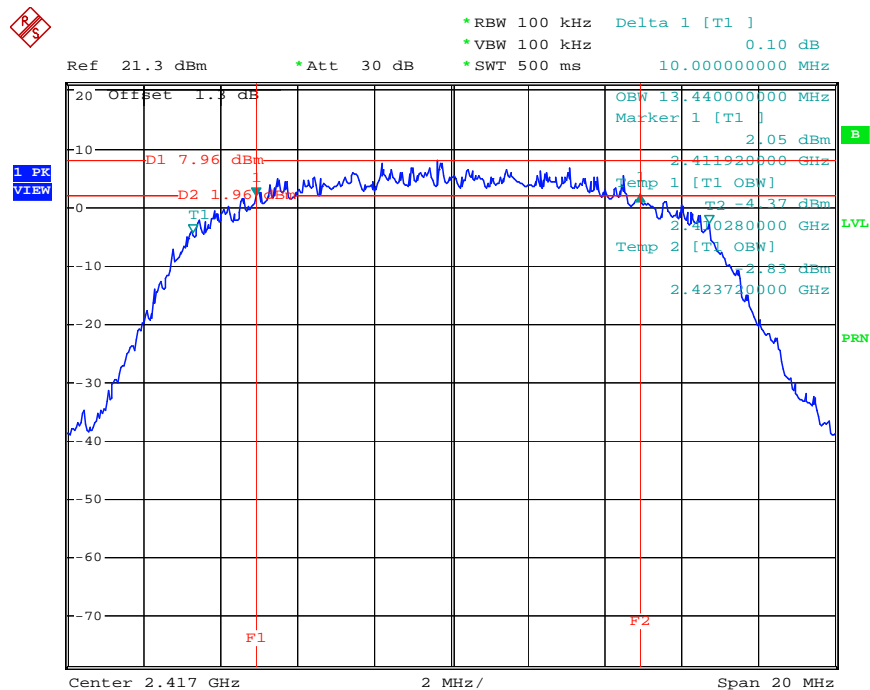
Frequency	6dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Min. Limit (kHz)	Test Result
5745 MHz	9.96	10.40	500	Complies
5785 MHz	11.08	10.16	500	Complies
5825 MHz	10.36	10.08	500	Complies

6 dB Bandwidth Plot on Configuration 2.4G Band / 2417 MHz



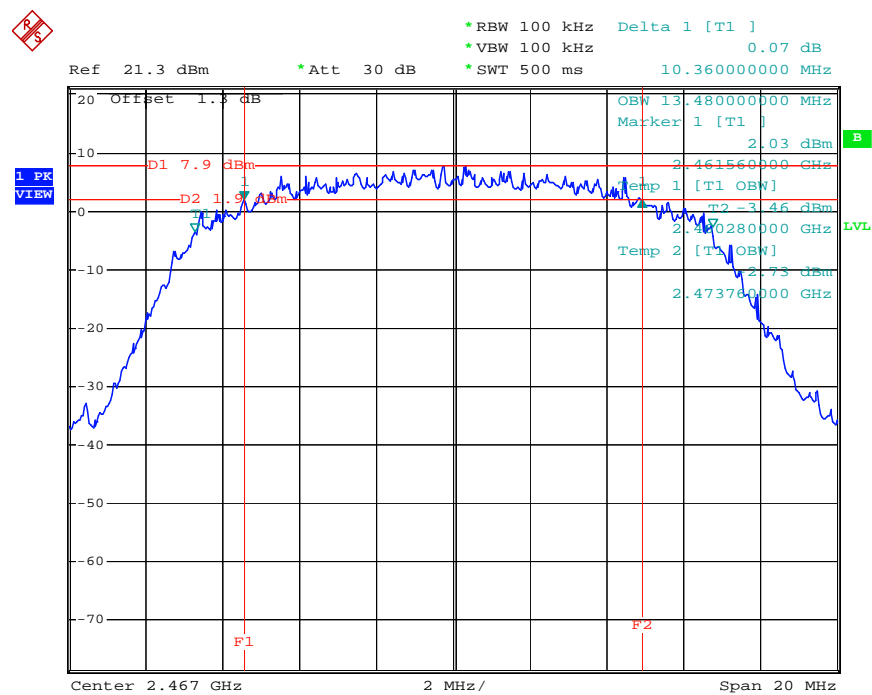
Date: 27.OCT.2008 14:22:20

6 dB Bandwidth Plot on Configuration 2.4G Band / 2427 MHz



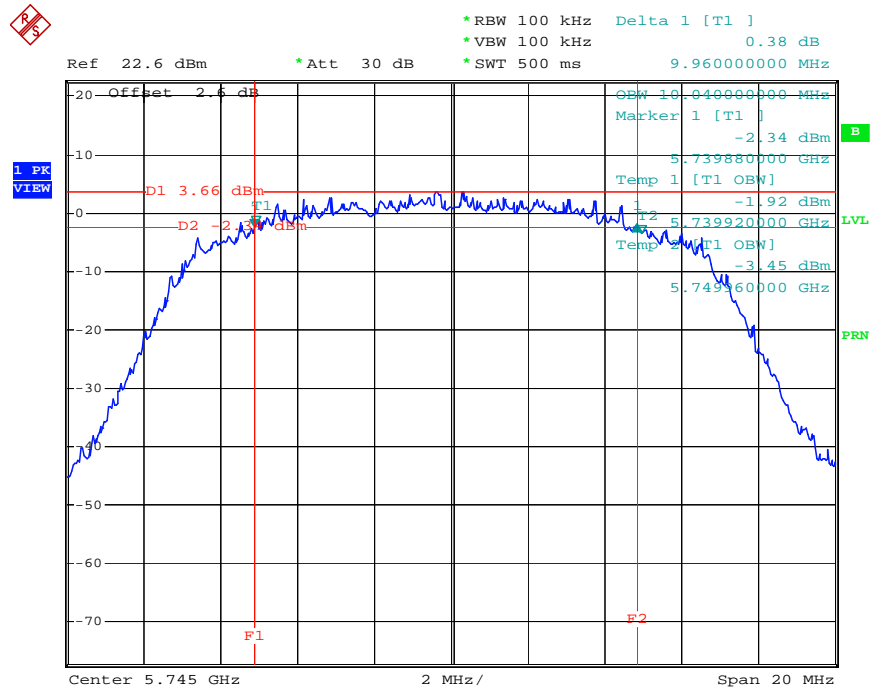
Date: 27.OCT.2008 13:50:49

6 dB Bandwidth Plot on Configuration 2.4G Band / 2467 MHz



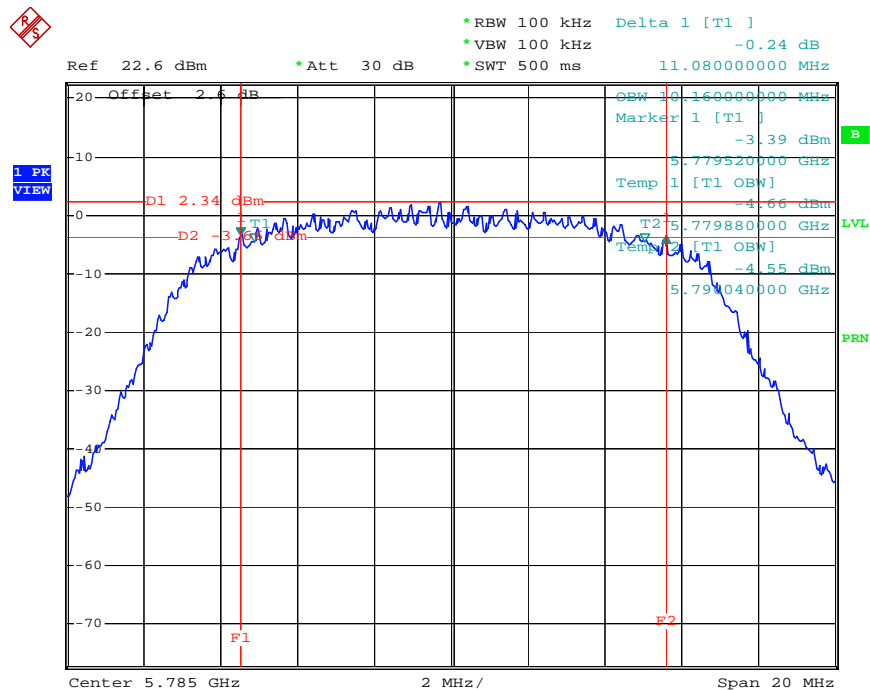
Date: 27.OCT.2008 13:41:34

6 dB Bandwidth Plot on Configuration 5G Band / 5745 MHz



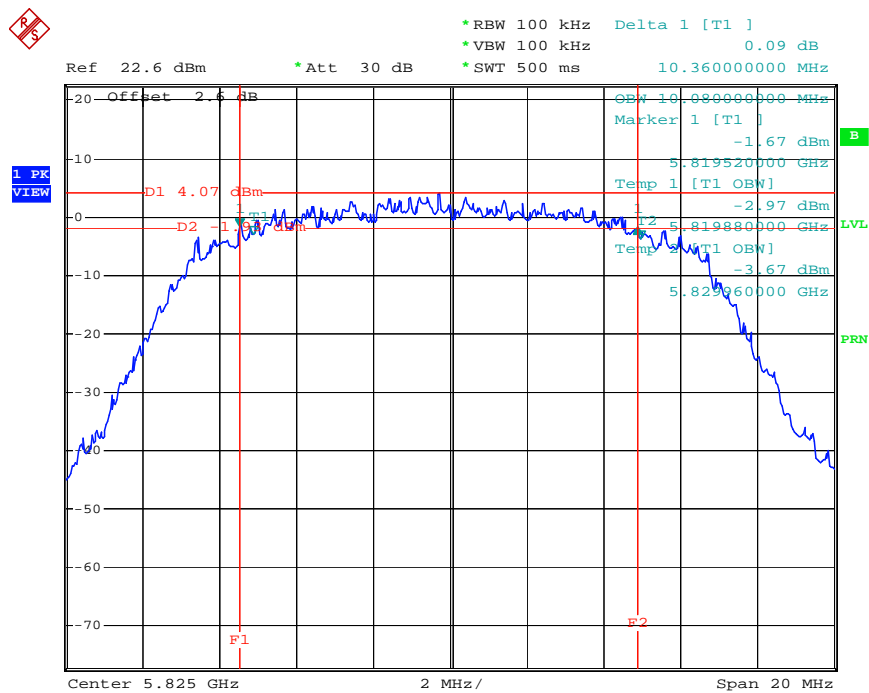
Date: 27.OCT.2008 14:57:26

6 dB Bandwidth Plot on Configuration 5G Band / 5785 MHz



Date: 27.OCT.2008 15:41:18

6 dB Bandwidth Plot on Configuration 5G Band / 5825 MHz



3.5 Radiated Emissions Measurement

3.5.1 Limit

20dBc in any 100 kHz 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.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

3.5.2 Measuring Instruments and Setting

Please refer to section 4 of equipments list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	100KHz / 100KHz for peak

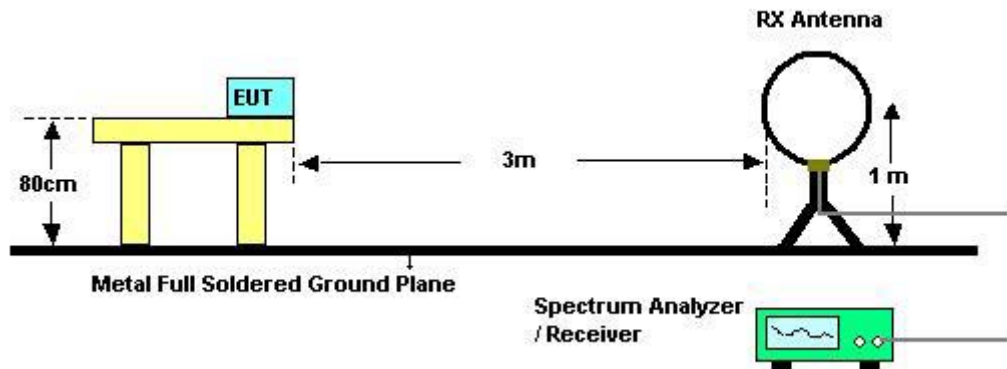
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.5.3 Test Procedures

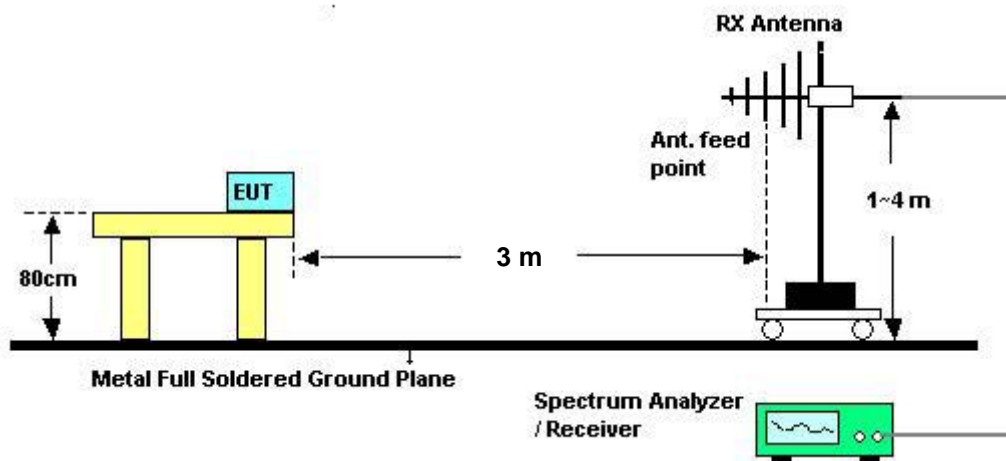
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High – Low scan is not required in this case.

3.5.4 Test Setup Layout

For radiated emissions below 30MHz



For radiated emissions above 30MHz



Above 10 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from 3m to 1m.

Distance extrapolation factor = $20 \log (\text{specific distance [3m]} / \text{test distance [1m]})$ (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [9.54 dB].

3.5.5 Test Deviation

There is no deviation with the original standard.

3.5.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.5.7 Results of Radiated Emissions (9kHz~30MHz)

Test date	Sep. 25, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam		

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Limit Line (dBuV)	Remark
-	-	-	-	See Note

Note:

The amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

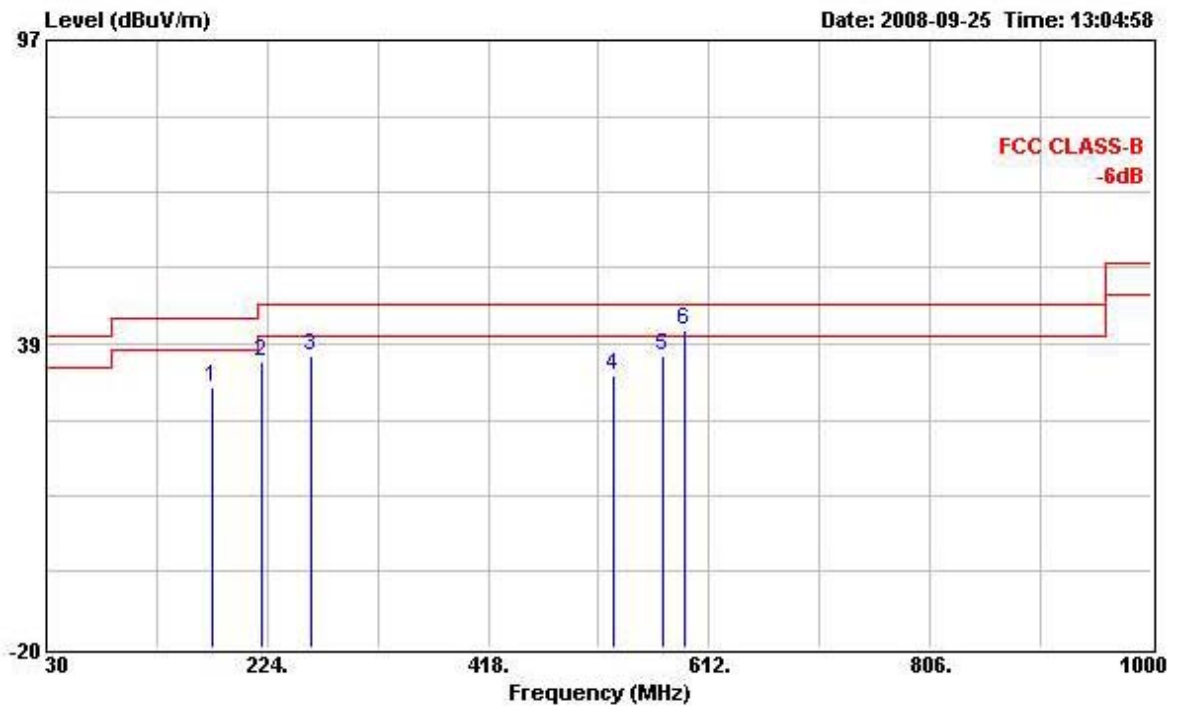
Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor.

3.5.8 Results of Radiated Emissions (30MHz~1GHz)

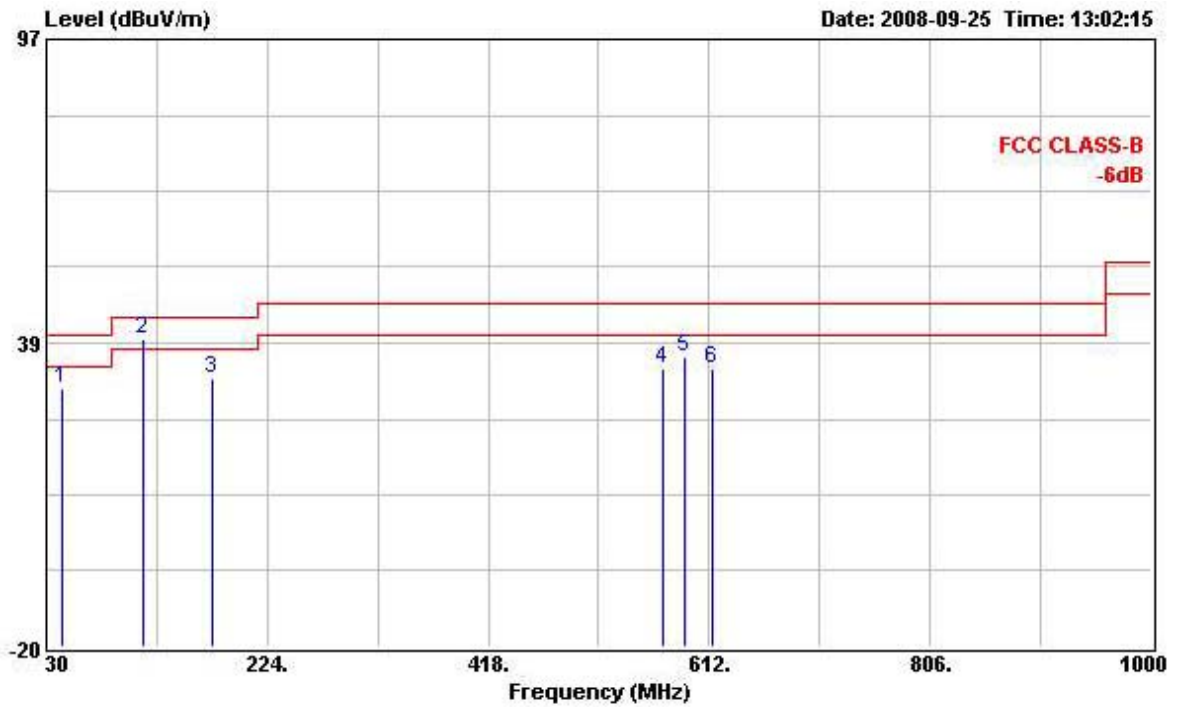
Test date	Sep. 25, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	Dipole Ant. (Black)

Horizontal



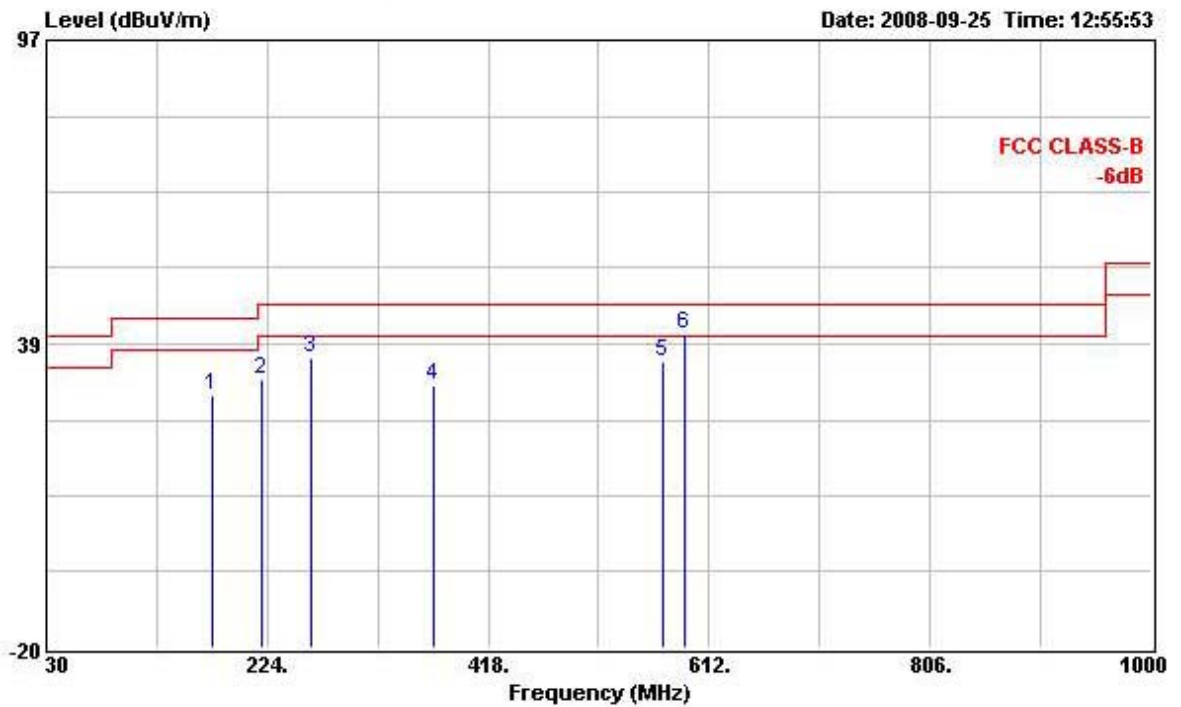
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	175.500	30.07	-13.43	43.50	48.26	9.88	2.58	30.65	Peak	---	---
2	219.150	34.97	-11.03	46.00	50.61	11.98	2.94	30.56	Peak	---	---
3	261.830	36.09	-9.91	46.00	50.21	13.16	3.20	30.48	Peak	---	---
4	528.580	32.35	-13.65	46.00	39.68	18.10	4.39	29.82	Peak	---	---
5	571.260	36.13	-9.87	46.00	41.86	19.34	4.62	29.69	Peak	---	---
6 !	590.660	41.05	-4.95	46.00	46.03	19.90	4.75	29.63	Peak	---	---

Vertical



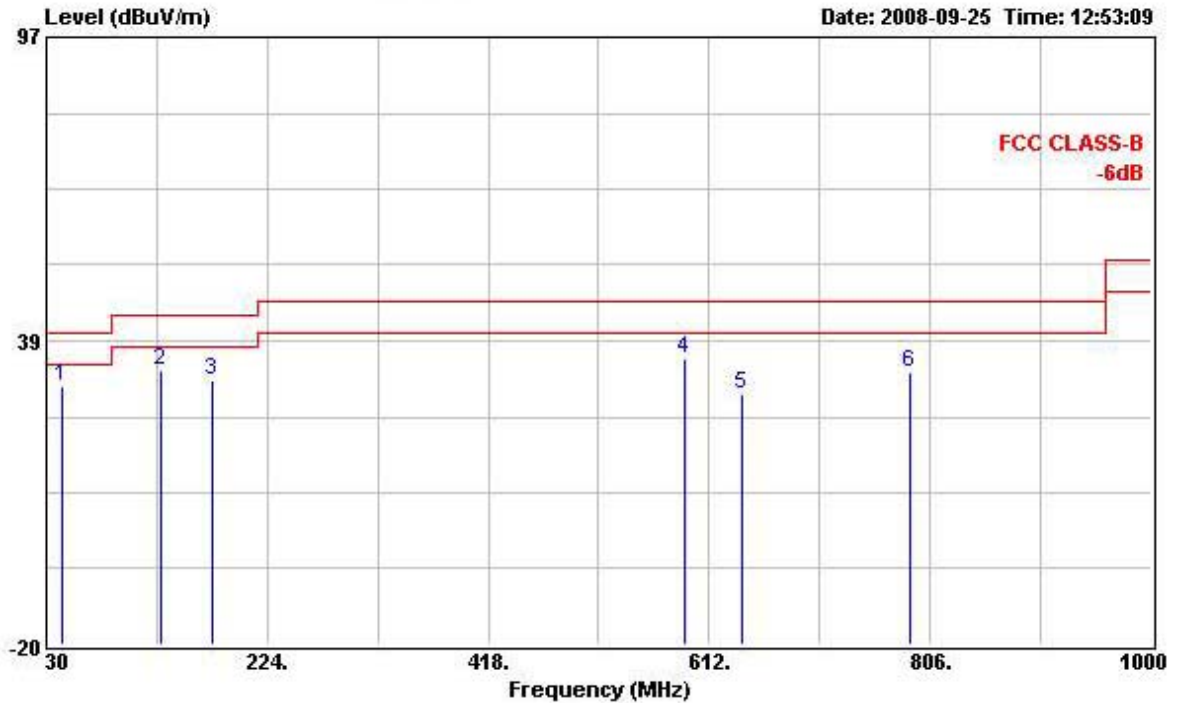
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	43.580	29.81	-10.19	40.00	46.99	12.27	1.38	30.83	Peak	---	---
2	114.390	39.14	-4.36	43.50	54.86	12.92	2.13	30.77	Peak	---	---
3	175.500	31.76	-11.74	43.50	49.95	9.88	2.58	30.65	Peak	---	---
4	571.260	33.66	-12.34	46.00	39.39	19.34	4.62	29.69	Peak	---	---
5	590.660	35.87	-10.13	46.00	40.85	19.90	4.75	29.63	Peak	---	---
6	614.910	33.65	-12.35	46.00	38.29	19.98	4.92	29.54	Peak	---	---

Test date	Sep. 25, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	Dipole Ant. (White)

Horizontal

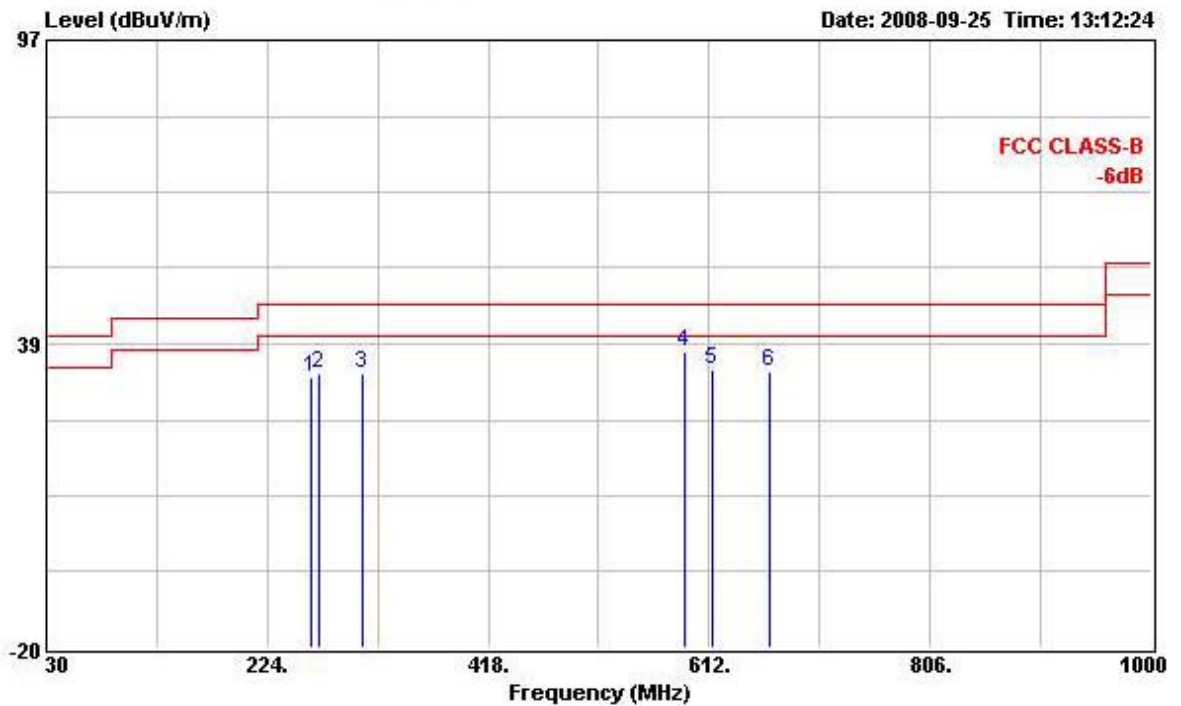
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	175.500	28.46	-15.04	43.50	46.65	9.88	2.58	30.65	Peak	---	---
2	219.150	31.85	-14.15	46.00	47.49	11.98	2.94	30.56	Peak	---	---
3	261.830	35.68	-10.32	46.00	49.80	13.16	3.20	30.48	Peak	---	---
4	369.500	30.37	-15.63	46.00	42.11	14.78	3.74	30.26	Peak	---	---
5	571.260	35.05	-10.95	46.00	40.78	19.34	4.62	29.69	Peak	---	---
6 !	590.660	40.34	-5.66	46.00	45.32	19.90	4.75	29.63	Peak	---	---

Vertical

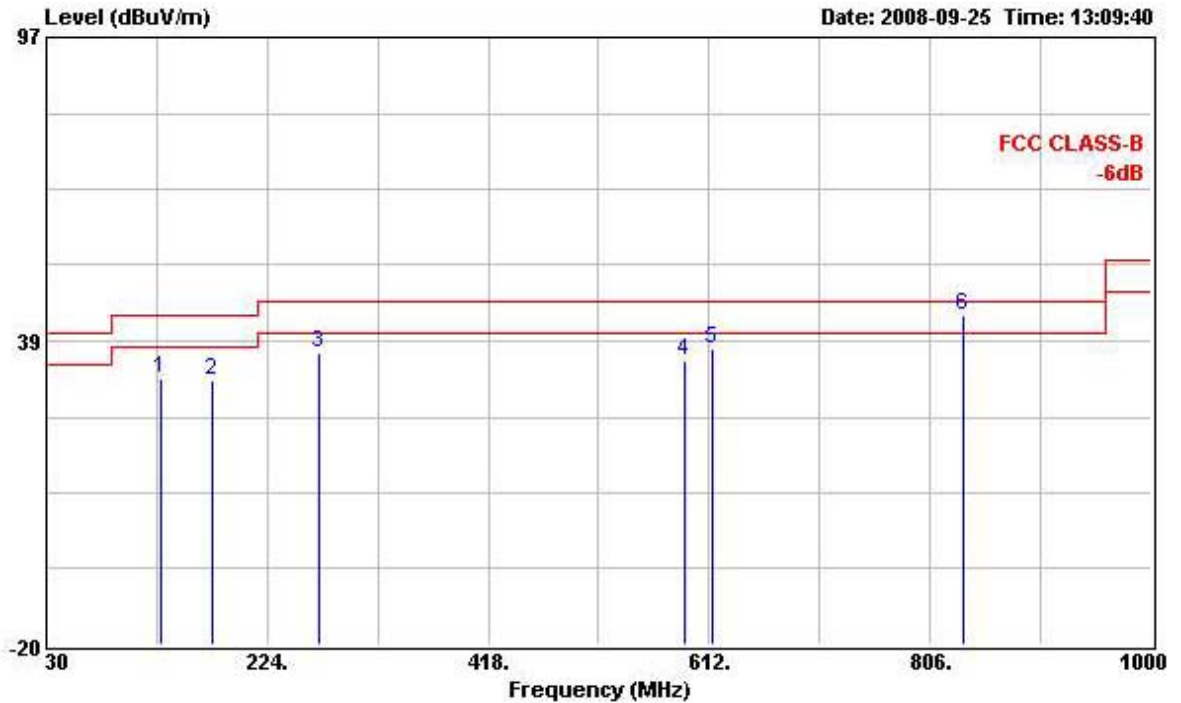


	Freq	Level	Over	Limit	Read	Probe	Cable	Preamp		Ant	Table
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
			dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	43.580	29.81	-10.19	40.00	46.99	12.27	1.38	30.83	Peak	---	---
2	129.910	32.62	-10.88	43.50	48.30	12.80	2.26	30.74	Peak	---	---
3	175.500	30.85	-12.65	43.50	49.04	9.88	2.58	30.65	Peak	---	---
4	590.660	35.23	-10.77	46.00	40.21	19.90	4.75	29.63	Peak	---	---
5	641.100	28.37	-17.63	46.00	33.08	19.63	5.10	29.44	Peak	---	---
6	788.540	32.46	-13.54	46.00	35.92	20.10	5.46	29.02	Peak	---	---

Test date	Sep. 25, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	Chip Ant.

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	261.830	31.98	-14.02	46.00	46.10	13.16	3.20	30.48	Peak	---	---
2	269.590	32.91	-13.09	46.00	46.84	13.27	3.26	30.46	Peak	---	---
3	307.420	32.80	-13.20	46.00	45.91	13.82	3.45	30.38	Peak	---	---
4	590.660	36.80	-9.20	46.00	41.78	19.90	4.75	29.63	Peak	---	---
5	614.910	33.44	-12.56	46.00	38.08	19.98	4.92	29.54	Peak	---	---
6	664.380	33.26	-12.74	46.00	38.13	19.32	5.15	29.34	Peak	---	---

Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	129.910	31.15	-12.35	43.50	46.83	12.80	2.26	30.74	Peak	---	---
2	175.500	30.86	-12.64	43.50	49.05	9.88	2.58	30.65	Peak	---	---
3	269.590	36.05	-9.95	46.00	49.98	13.27	3.26	30.46	Peak	---	---
4	590.660	34.72	-11.28	46.00	39.70	19.90	4.75	29.63	Peak	---	---
5	614.910	36.97	-9.03	46.00	41.61	19.98	4.92	29.54	Peak	---	---
6 !	835.100	43.43	-2.57	46.00	46.61	20.19	5.52	28.89	Peak	---	---

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

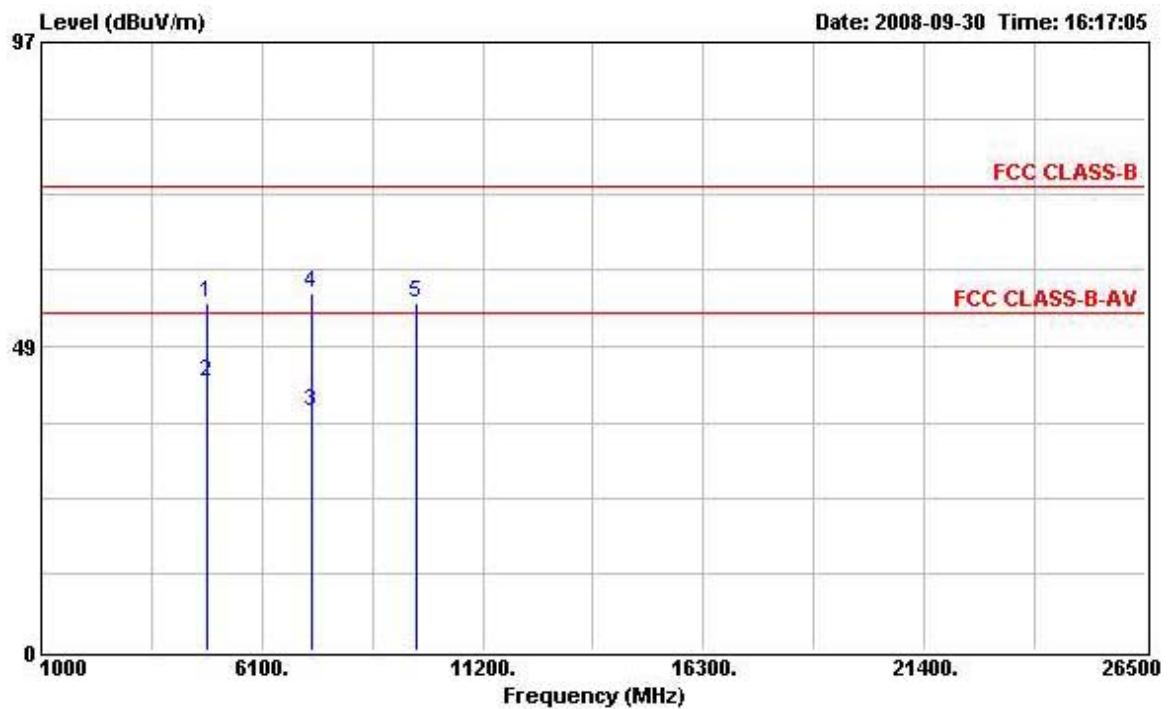
3.5.9 Results for Radiated Emissions (1GHz~10th Harmonic)

2.4G Band

Dipole Ant. (Black)

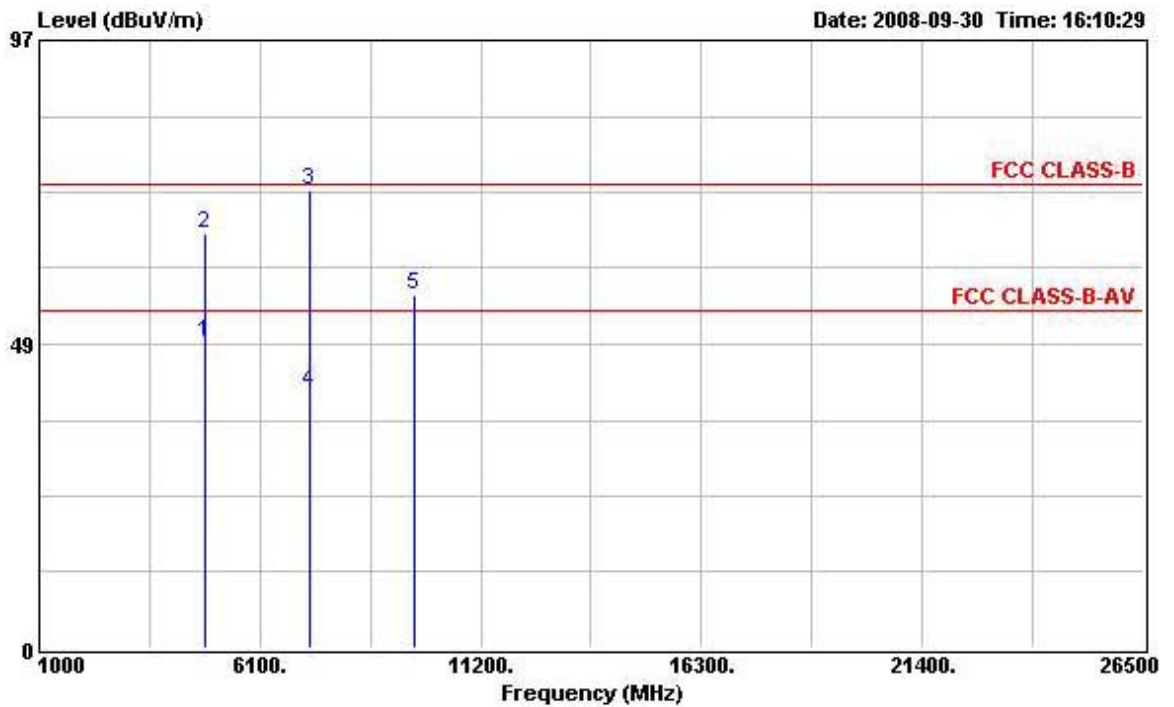
Test date	Sep. 30, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	2417MHz

Horizontal



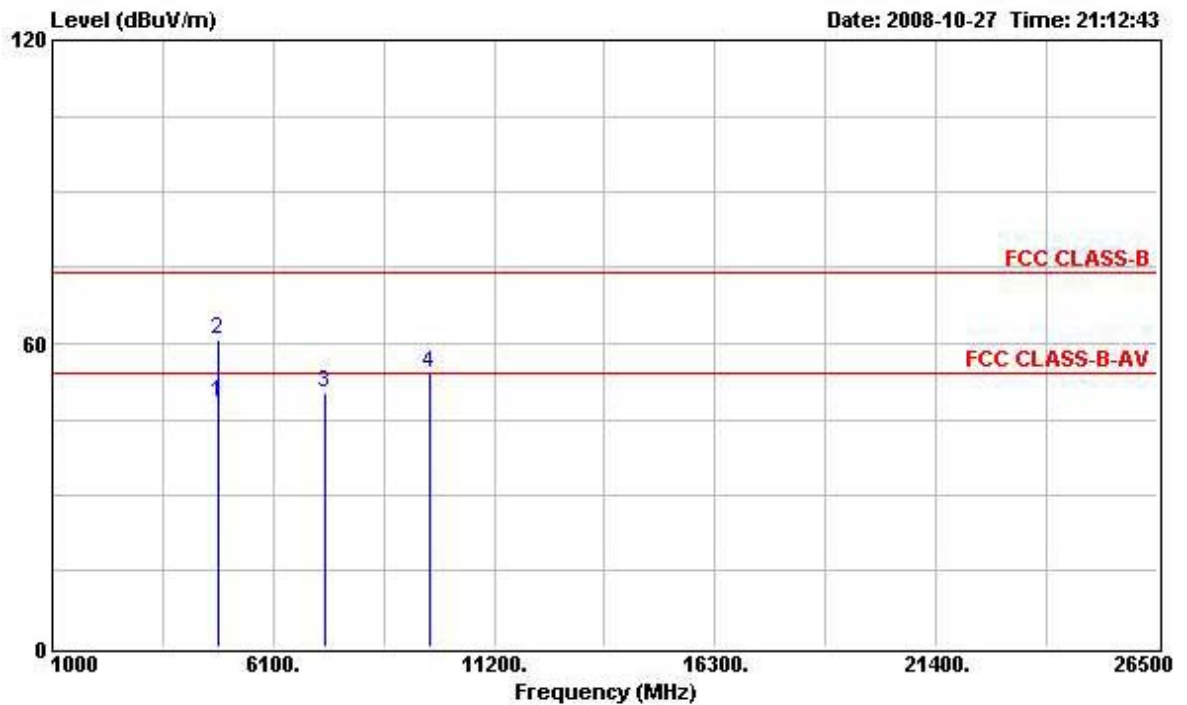
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	4834.000	55.50	-18.50	74.00	52.80	33.05	4.59	34.94	Peak	---	---
2	4834.000	42.89	-11.11	54.00	40.19	33.05	4.59	34.94	Average	---	---
3	7251.000	38.02	-15.98	54.00	31.57	36.07	5.63	35.25	Average	---	---
4	7251.000	56.92	-17.08	74.00	50.47	36.07	5.63	35.25	Peak	---	---
5	9668.000	55.57	-18.43	74.00	46.95	37.97	6.35	35.70	Peak	---	---

Vertical



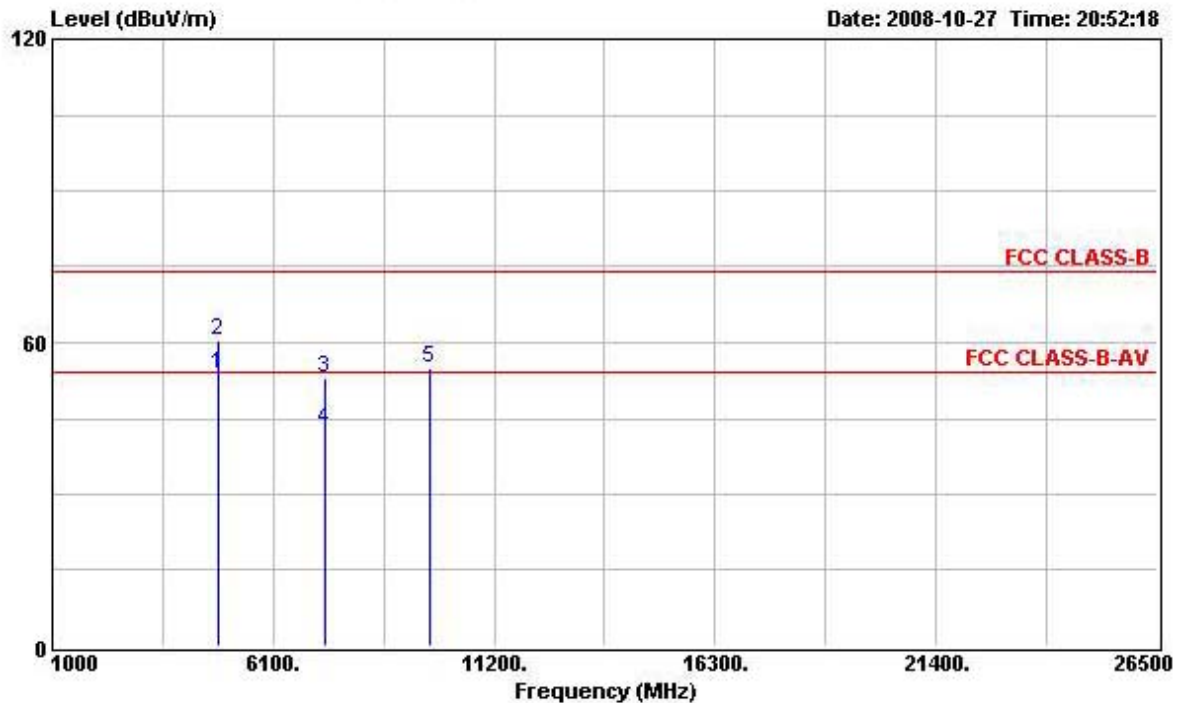
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBUV/m	dB	dBUV/m	dBUV	dB	dB	dB		cm	deg
1	4834.000	48.92	-5.08	54.00	46.22	33.05	4.59	34.94	Average	---	---
2	4834.000	66.15	-7.85	74.00	63.45	33.05	4.59	34.94	Peak	---	---
3	7251.000	73.03	-0.97	74.00	66.58	36.07	5.63	35.25	Peak	---	---
4	7251.000	41.03	-12.97	54.00	34.58	36.07	5.63	35.25	Average	---	---
5	9668.000	56.32	-17.68	74.00	47.70	37.97	6.35	35.70	Peak	---	---

Test date	Oct. 27, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	2427MHz

Horizontal

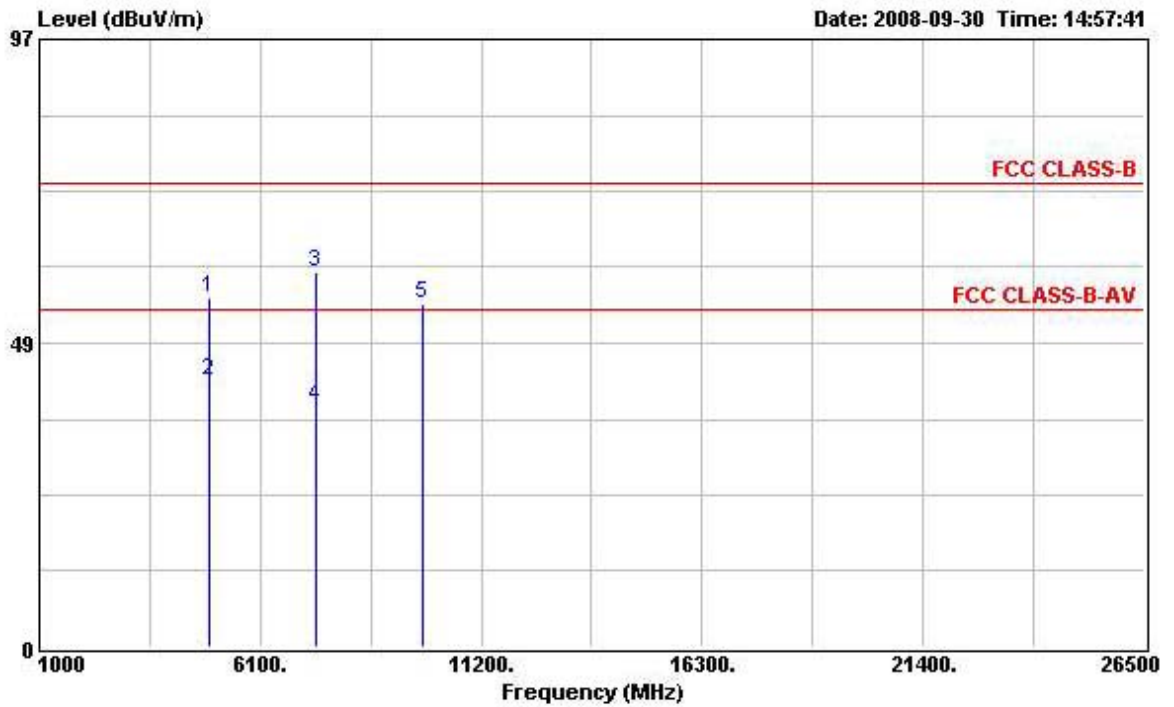
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	4854.000	48.48	-5.52	54.00	45.71	33.08	4.62	34.93	Average	---	---
2	4854.000	60.66	-13.34	74.00	57.89	33.08	4.62	34.93	Peak	---	---
3	7281.000	50.22	-3.78	54.00	43.72	36.12	5.64	35.26	Average	---	---
4	9708.000	54.00	-20.00	74.00	45.37	37.98	6.35	35.70	Peak	---	---

Vertical



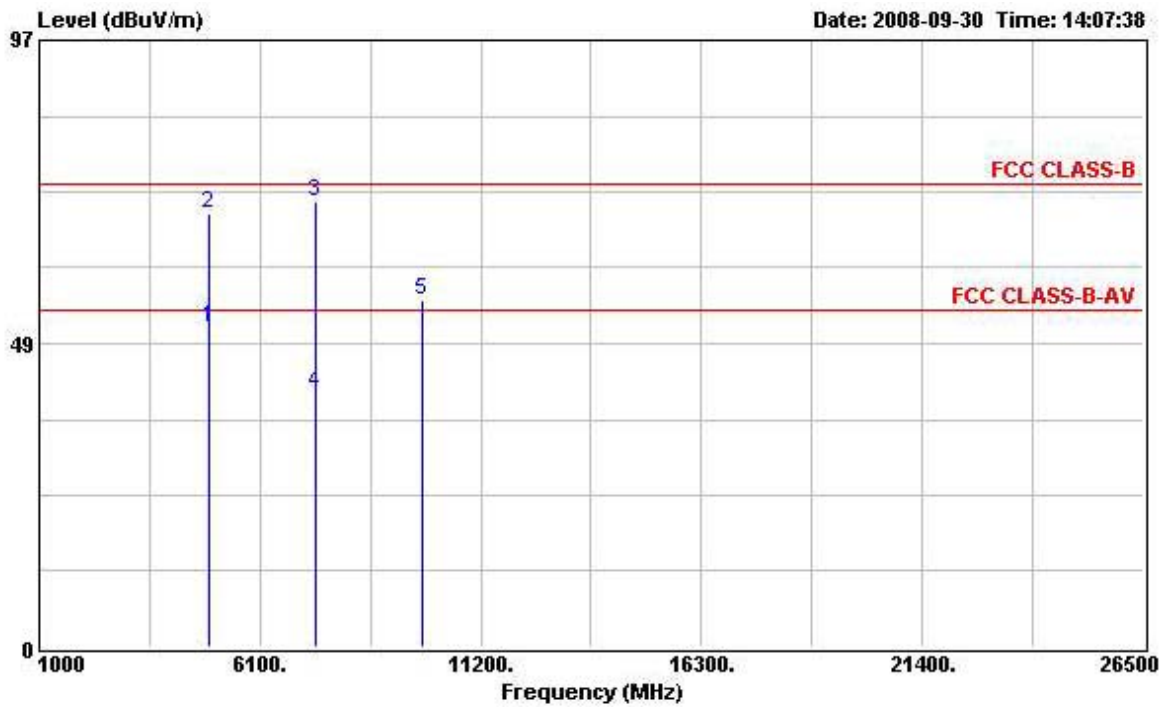
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	4854.000	53.78	-0.22	54.00	51.01	33.08	4.62	34.93	Average	---	---
2	4854.000	60.25	-13.75	74.00	57.48	33.08	4.62	34.93	Peak	---	---
3	7281.000	53.16	-20.84	74.00	46.66	36.12	5.64	35.26	Peak	---	---
4	7281.000	43.01	-10.99	54.00	36.51	36.12	5.64	35.26	Average	---	---
5	9708.000	54.79	-19.21	74.00	46.16	37.98	6.35	35.70	Peak	---	---

Test date	Sep. 30, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	2467MHz

Horizontal

	Freq	Level	Over	Limit	Read	Probe	Cable	Preamp	Remark	Ant	Table
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor		Pos	Pos
			dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	4934.000	55.90	-18.10	74.00	52.94	33.19	4.69	34.92	Peak	---	---
2	4934.000	42.58	-11.42	54.00	39.62	33.19	4.69	34.92	Average	---	---
3	7401.000	59.98	-14.02	74.00	53.13	36.48	5.65	35.28	Peak	---	---
4	7401.000	38.29	-15.71	54.00	31.44	36.48	5.65	35.28	Average	---	---
5	9868.000	54.95	-19.05	74.00	46.22	38.05	6.38	35.70	Peak	---	---

Vertical

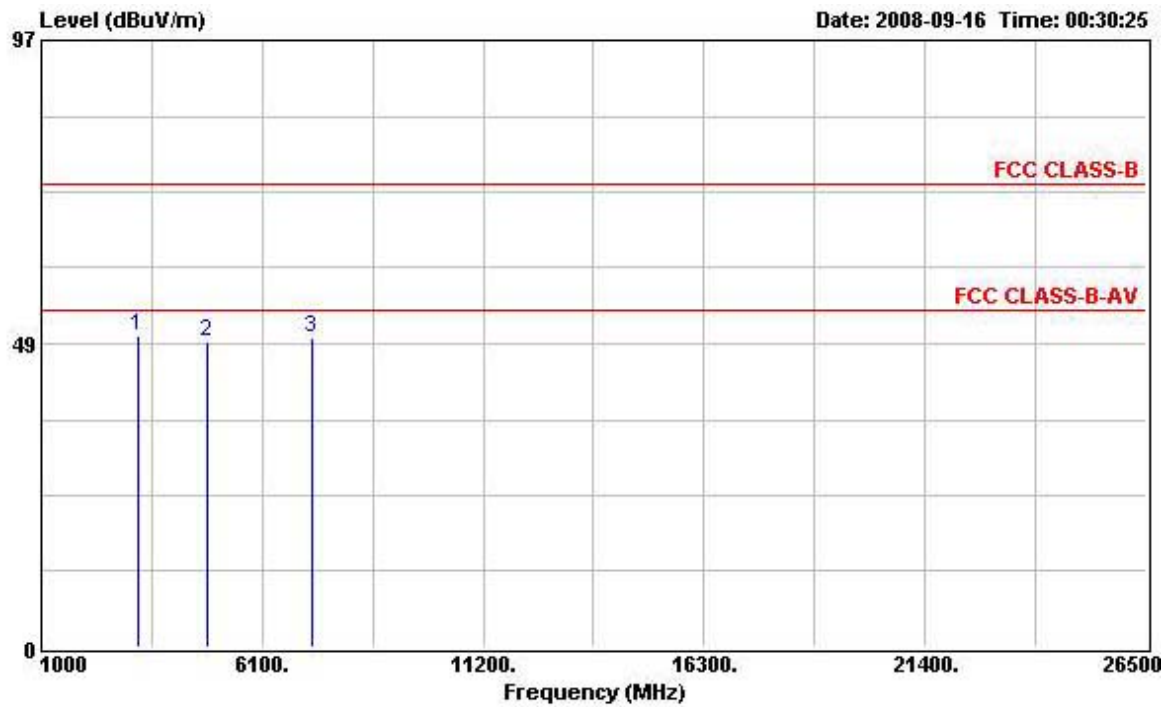


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	4934.000	51.00	-3.00	54.00	48.04	33.19	4.69	34.92	Average	---	---
2	4934.000	69.20	-4.80	74.00	66.24	33.19	4.69	34.92	Peak	---	---
3	7401.000	71.28	-2.72	74.00	64.43	36.48	5.65	35.28	Peak	---	---
4	7401.000	40.52	-13.48	54.00	33.67	36.48	5.65	35.28	Average	---	---
5	9868.000	55.52	-18.48	74.00	46.79	38.05	6.38	35.70	Peak	---	---

Dipole Ant. (White)

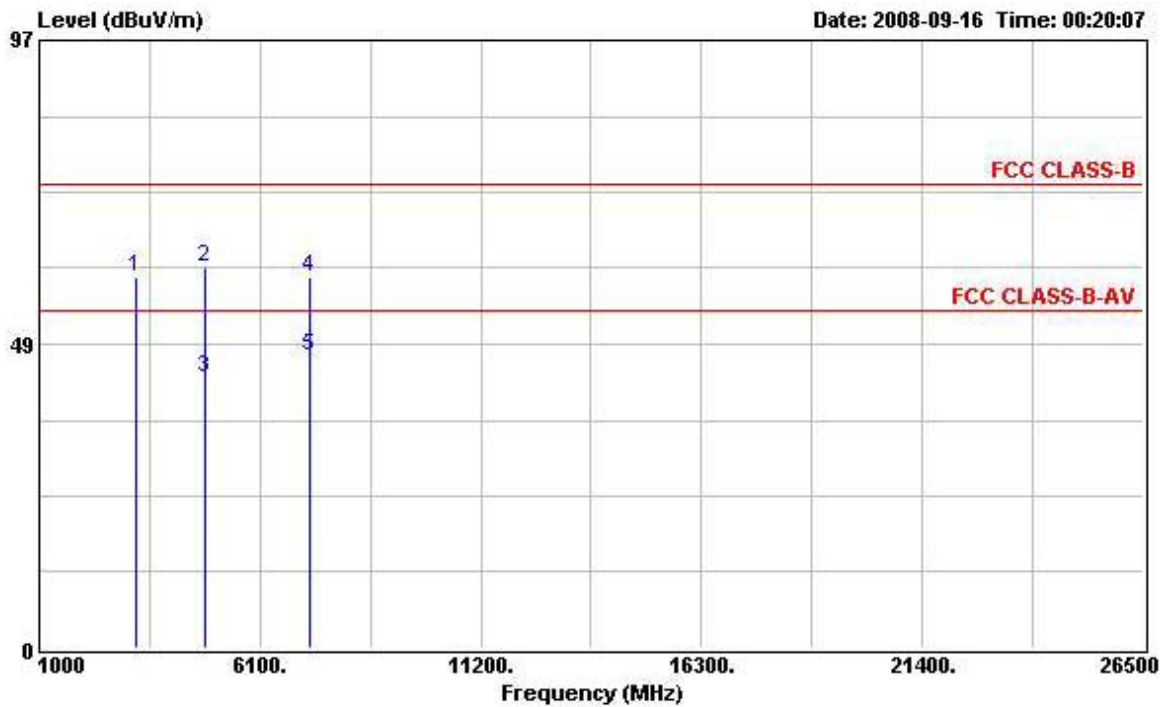
Test date	Sep. 16, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	2417MHz

Horizontal



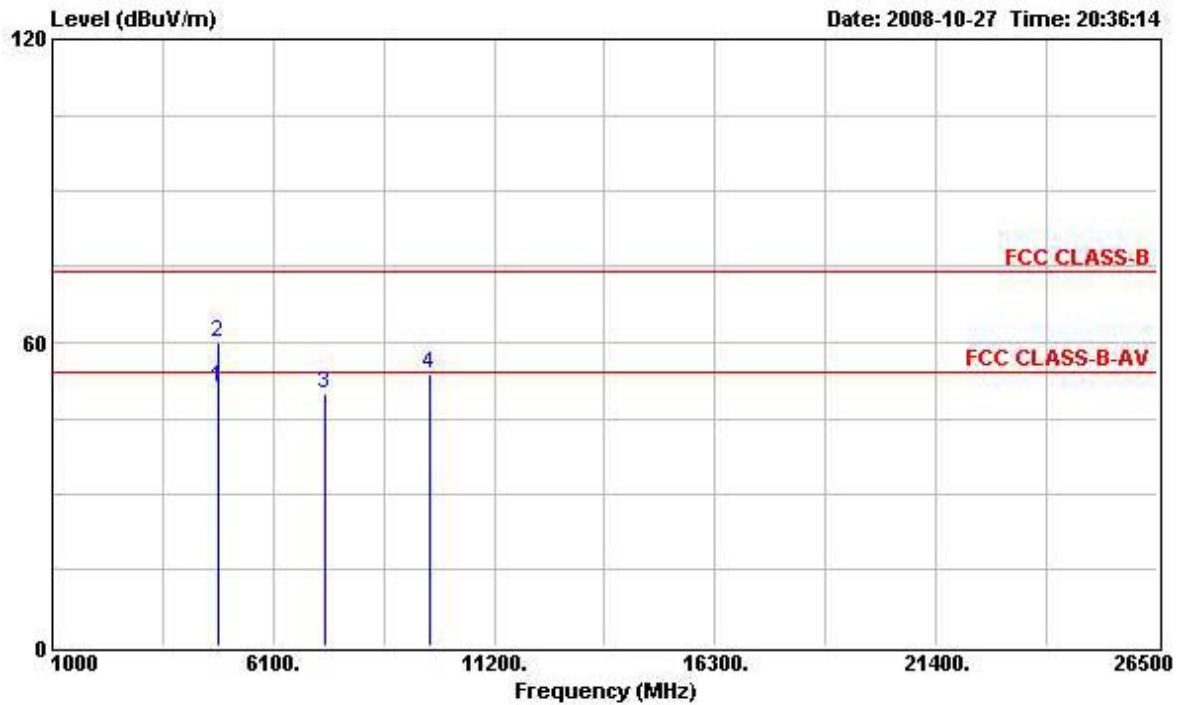
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBUV/m	dB	dBUV/m	dBUV	dB	dB	dB		cm	deg
1	3220.000	49.87	-24.13	74.00	50.72	30.59	3.62	35.06	Peak	---	---
2	4836.000	48.73	-25.27	74.00	46.03	33.05	4.59	34.94	Peak	---	---
3	7248.000	49.58	-24.42	74.00	43.13	36.07	5.63	35.25	Peak	---	---

Vertical



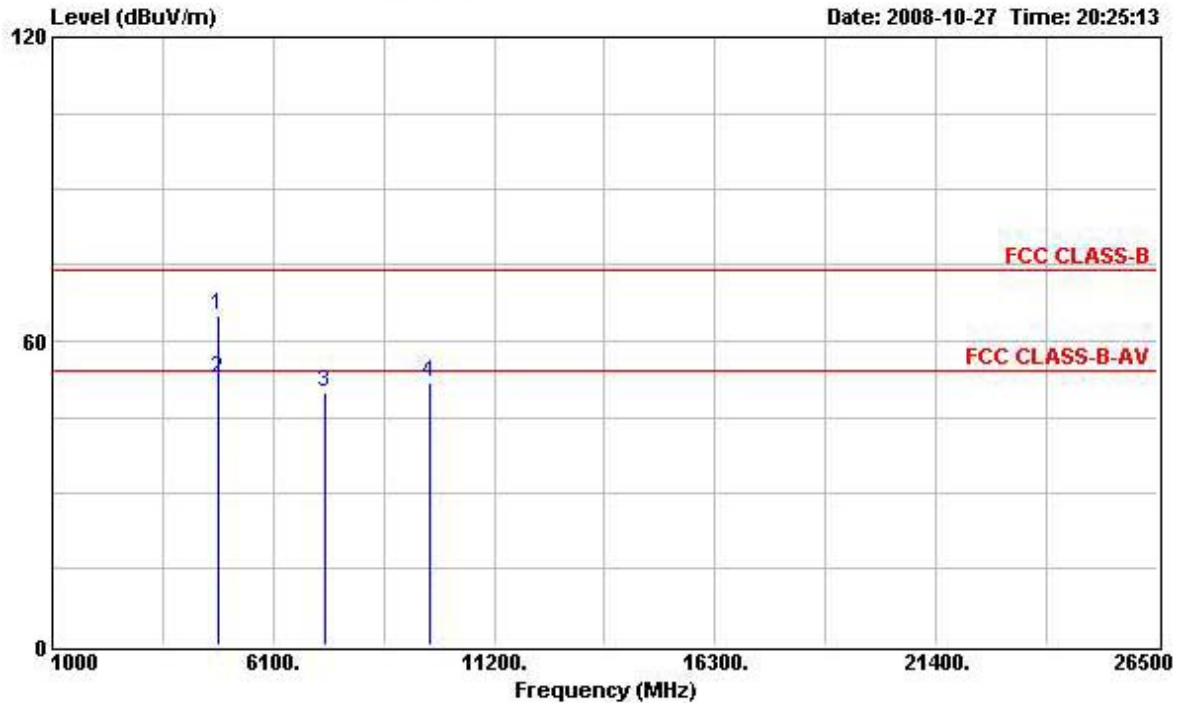
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3220.000	59.33	-14.67	74.00	60.18	30.59	3.62	35.06	Peak	---	---
2	4836.000	60.83	-13.17	74.00	58.13	33.05	4.59	34.94	Peak	---	---
3	4836.000	43.18	-10.82	54.00	40.48	33.05	4.59	34.94	Average	---	---
4	7252.000	59.24	-14.76	74.00	52.79	36.07	5.63	35.25	Peak	---	---
5	7252.000	46.60	-7.40	54.00	40.15	36.07	5.63	35.25	Average	---	---

Test date	Oct. 27, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	2427MHz

Horizontal

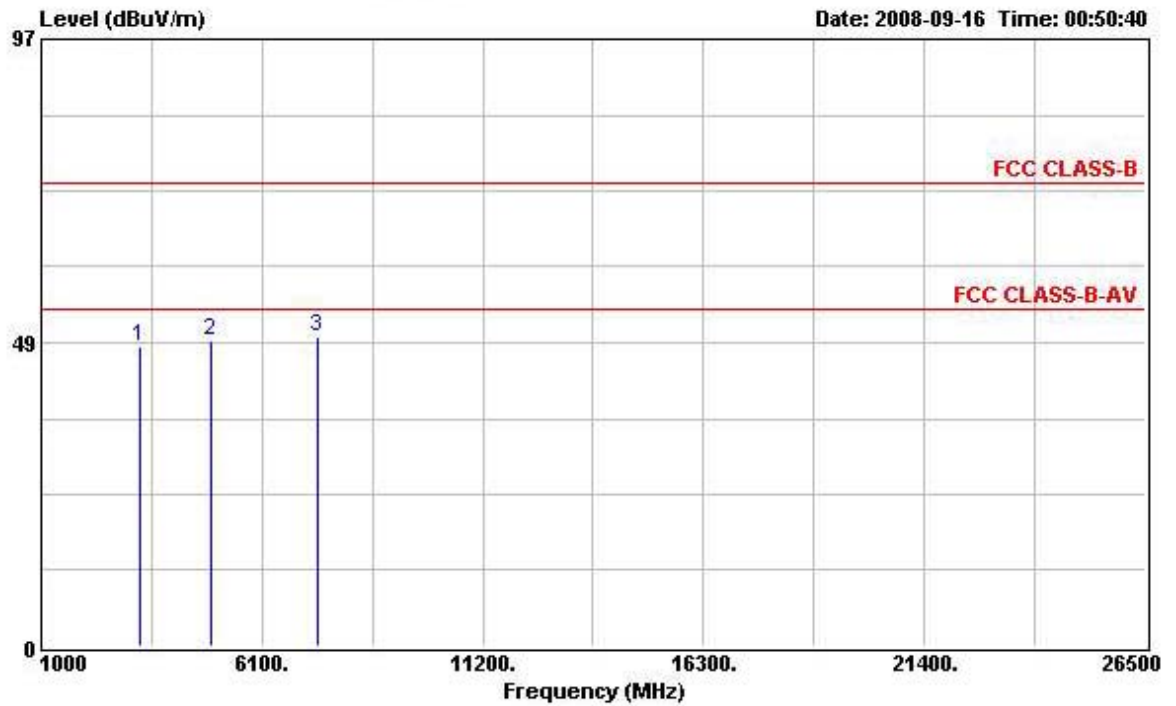
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBUV/m	dB	dBUV/m	dBUV	dB	dB	dB		cm	deg
1	4854.000	51.16	-2.84	54.00	48.39	33.08	4.62	34.93	Average	---	---
2	4854.000	60.05	-13.95	74.00	57.28	33.08	4.62	34.93	Peak	---	---
3	7281.000	49.70	-4.30	54.00	43.20	36.12	5.64	35.26	Average	---	---
4	9708.000	53.82	-20.18	74.00	45.19	37.98	6.35	35.70	Peak	---	---

Vertical



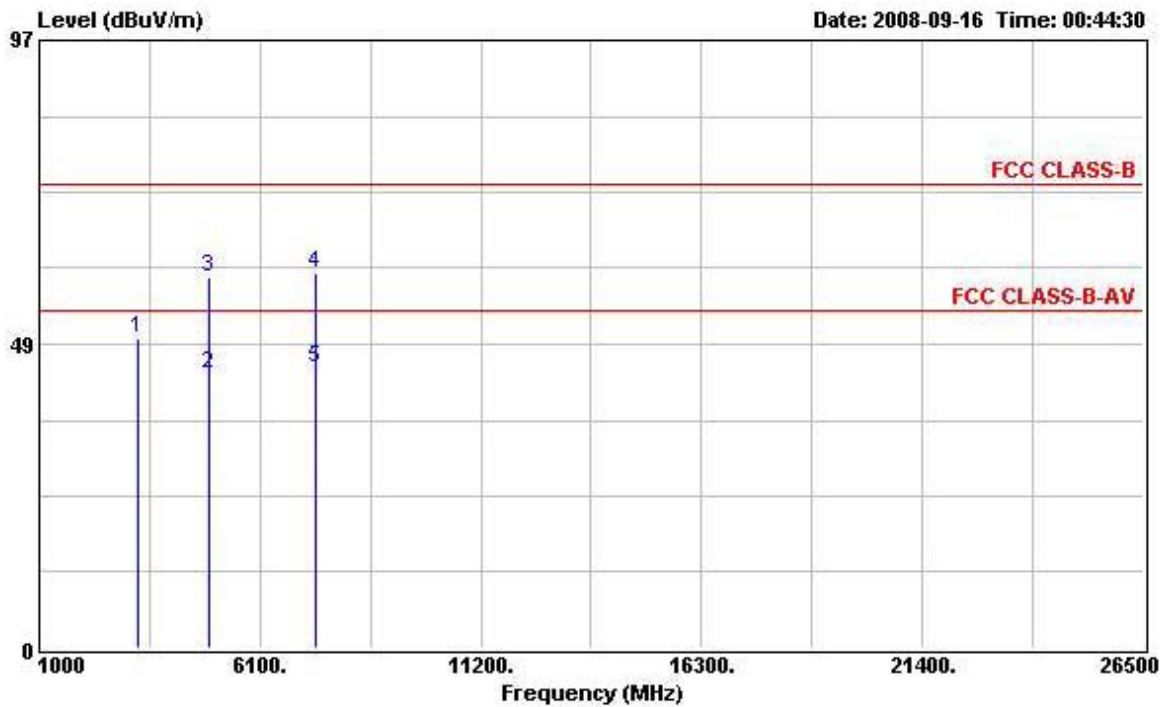
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBUV/m	dB	dB		dB	dB	dB		cm	deg
1	4854.000	65.05	-8.95	74.00	62.28	33.08	4.62	34.93	Peak	---	---
2	4854.000	52.63	-1.37	54.00	49.86	33.08	4.62	34.93	Average	---	---
3	7281.000	49.97	-4.03	54.00	43.47	36.12	5.64	35.26	Average	---	---
4	9708.000	52.00	-22.00	74.00	43.37	37.98	6.35	35.70	Peak	---	---

Test date	Sep. 16, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	2467MHz

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3288.000	47.74	-26.26	74.00	48.37	30.74	3.67	35.04	Peak	---	---
2	4936.000	48.84	-25.16	74.00	45.85	33.22	4.69	34.92	Peak	---	---
3	7400.000	49.42	-24.58	74.00	42.62	36.43	5.65	35.28	Peak	---	---

Vertical

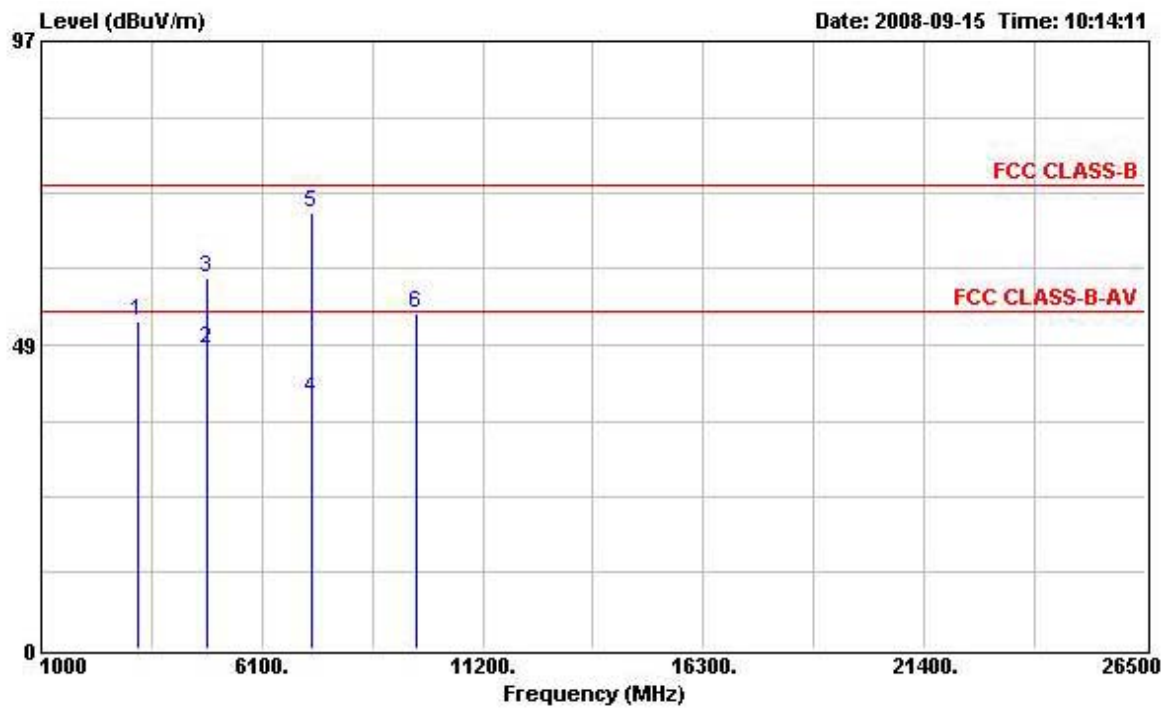


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3288.000	49.31	-24.69	74.00	49.94	30.74	3.67	35.04	Peak	---	---
2	4936.000	43.84	-10.16	54.00	40.85	33.22	4.69	34.92	Average	---	---
3	4936.000	59.30	-14.70	74.00	56.31	33.22	4.69	34.92	Peak	---	---
4	7404.000	59.99	-14.01	74.00	53.14	36.48	5.65	35.28	Peak	---	---
5	7404.000	44.73	-9.27	54.00	37.88	36.48	5.65	35.28	Average	---	---

Chip Ant.

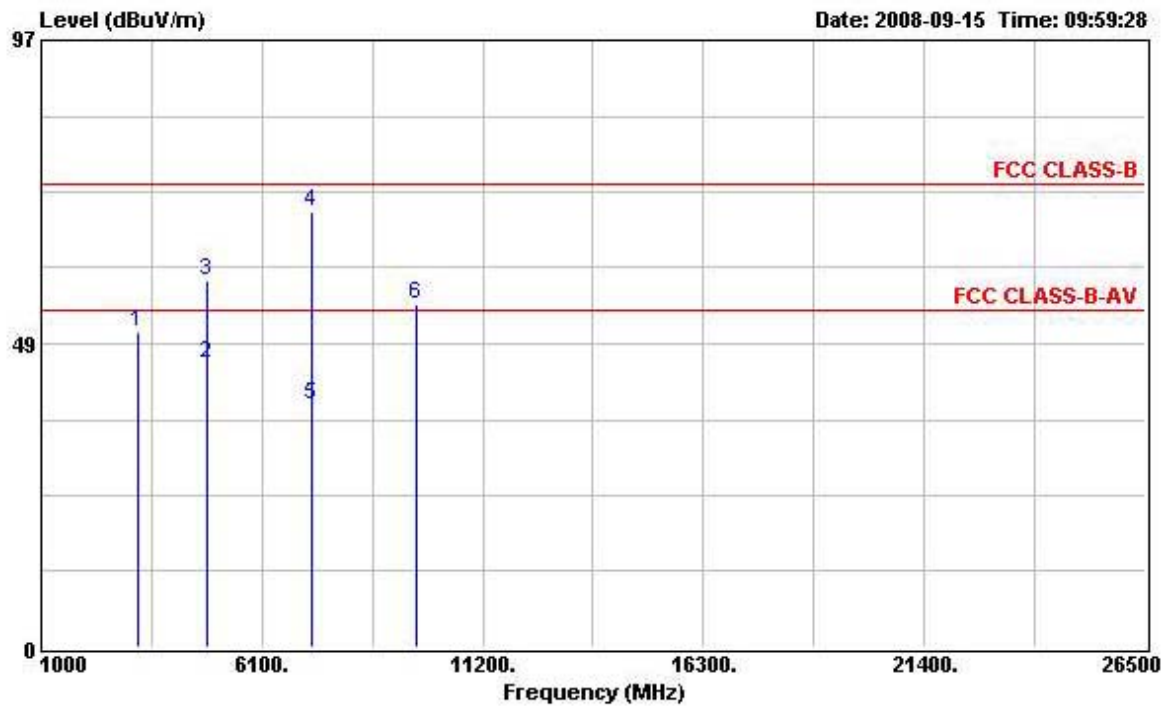
Test date	Sep. 15, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	2417MHz

Horizontal



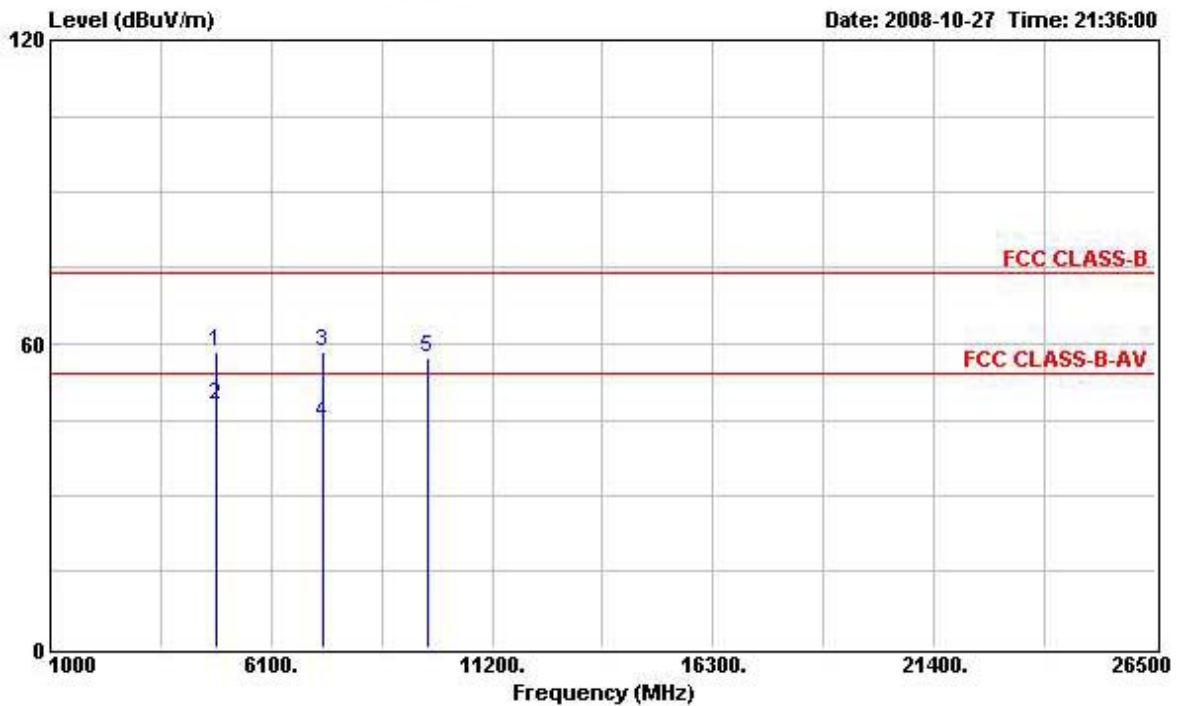
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB	dB	dB		cm	deg
1	3220.000	52.17	-21.83	74.00	53.02	30.59	3.62	35.06	Peak	---	---
2	4834.000	48.01	-5.99	54.00	45.31	33.05	4.59	34.94	Average	---	---
3	4834.000	59.12	-14.88	74.00	56.42	33.05	4.59	34.94	Peak	---	---
4	7251.000	40.04	-13.96	54.00	33.59	36.07	5.63	35.25	Average	---	---
5	7251.000	69.55	-4.45	74.00	63.10	36.07	5.63	35.25	Peak	---	---
6	9668.000	53.54	-20.46	74.00	44.92	37.97	6.35	35.70	Peak	---	---

Vertical



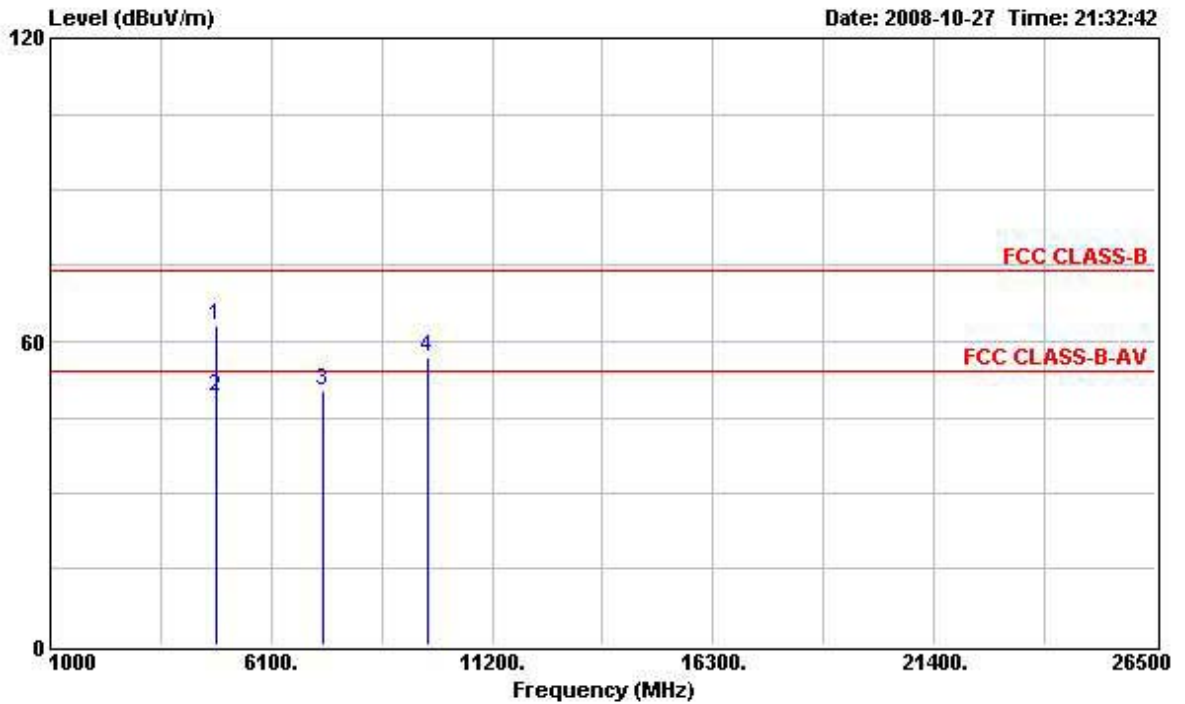
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3220.000	50.50	-23.50	74.00	51.35	30.59	3.62	35.06	Peak	---	---
2	4834.000	45.46	-8.54	54.00	42.76	33.05	4.59	34.94	Average	---	---
3	4834.000	58.70	-15.30	74.00	56.00	33.05	4.59	34.94	Peak	---	---
4	7251.000	69.66	-4.34	74.00	63.21	36.07	5.63	35.25	Peak	---	---
5	7251.000	38.83	-15.17	54.00	32.38	36.07	5.63	35.25	Average	---	---
6	9668.000	54.72	-19.28	74.00	46.10	37.97	6.35	35.70	Peak	---	---

Test date	Oct. 27, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	2427MHz

Horizontal

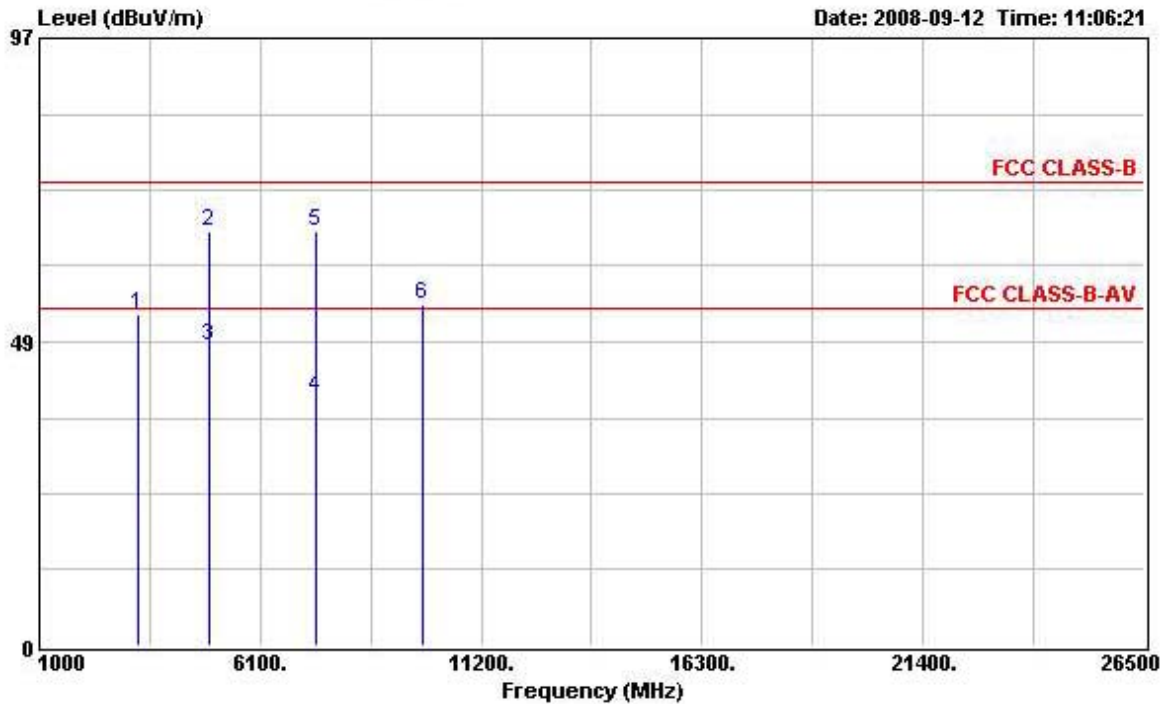
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	4854.000	58.33	-15.67	74.00	55.56	33.08	4.62	34.93	Peak	---	---
2	4854.000	47.92	-6.08	54.00	45.15	33.08	4.62	34.93	Average	---	---
3	7281.000	58.28	-15.72	74.00	51.78	36.12	5.64	35.26	Peak	---	---
4	7281.000	44.48	-9.52	54.00	37.98	36.12	5.64	35.26	Average	---	---
5	9708.000	57.20	-16.80	74.00	48.57	37.98	6.35	35.70	Peak	---	---

Vertical



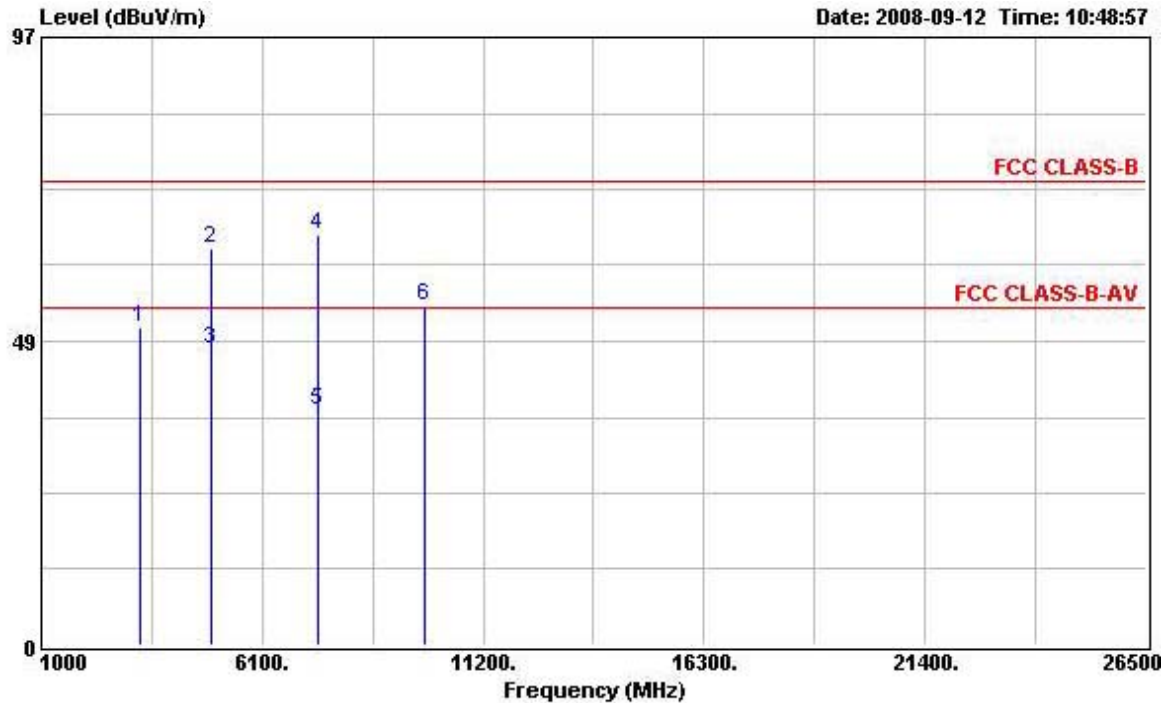
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	4854.000	63.31	-10.69	74.00	60.54	33.08	4.62	34.93	Peak	---	---
2	4854.000	48.92	-5.08	54.00	46.15	33.08	4.62	34.93	Average	---	---
3	7281.000	50.15	-3.85	54.00	43.65	36.12	5.64	35.26	Average	---	---
4	9708.000	56.79	-17.21	74.00	48.16	37.98	6.35	35.70	Peak	---	---

Test date	Sep. 12, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	2467MHz

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3288.000	52.93	-21.07	74.00	53.56	30.74	3.67	35.04	Peak	---	---
2	4934.000	66.19	-7.81	74.00	63.23	33.19	4.69	34.92	Peak	---	---
3	4934.000	47.89	-6.11	54.00	44.93	33.19	4.69	34.92	Average	---	---
4	7401.000	39.62	-14.38	54.00	32.77	36.48	5.65	35.28	Average	---	---
5	7401.000	66.06	-7.94	74.00	59.21	36.48	5.65	35.28	Peak	---	---
6	9868.000	54.55	-19.45	74.00	45.82	38.05	6.38	35.70	Peak	---	---

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3289.000	50.70	-23.30	74.00	51.33	30.74	3.67	35.04	Peak	---	---
2	4934.000	63.28	-10.72	74.00	60.32	33.19	4.69	34.92	Peak	---	---
3	4934.000	47.13	-6.87	54.00	44.17	33.19	4.69	34.92	Average	---	---
4	7401.000	65.47	-8.53	74.00	58.62	36.48	5.65	35.28	Peak	---	---
5	7401.000	37.55	-16.45	54.00	30.70	36.48	5.65	35.28	Average	---	---
6	9868.000	54.16	-19.84	74.00	45.43	38.05	6.38	35.70	Peak	---	---

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

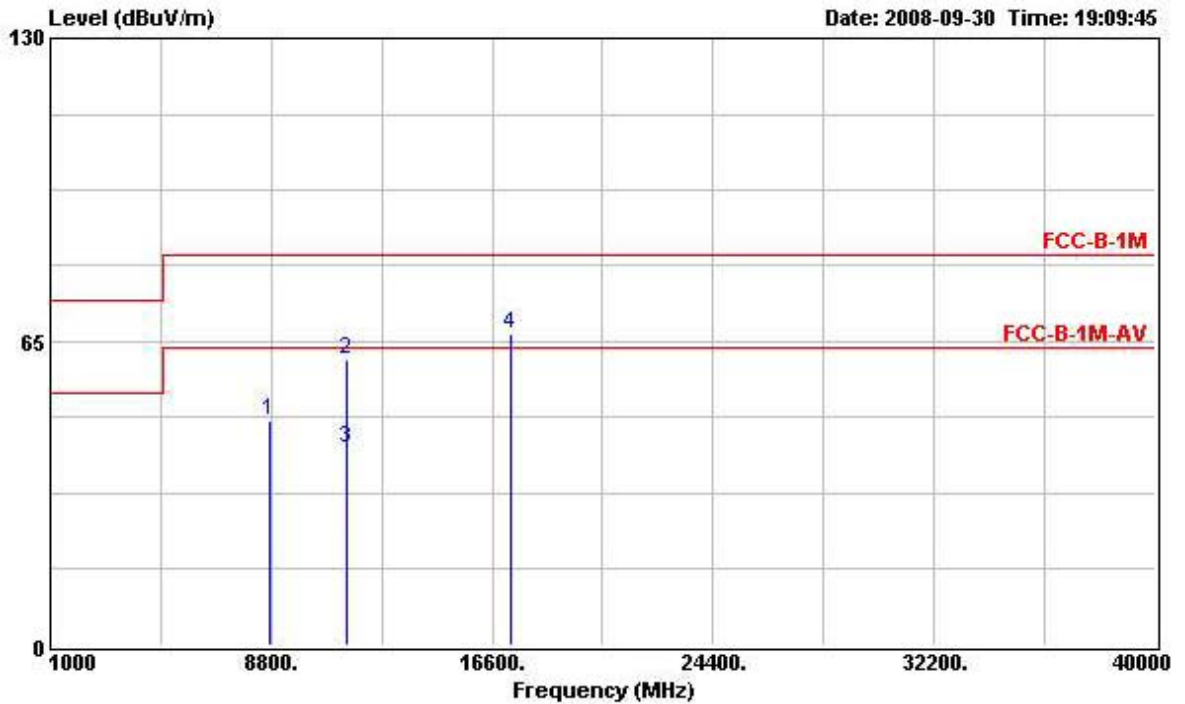
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

5G Band

Dipole Ant. (Black)

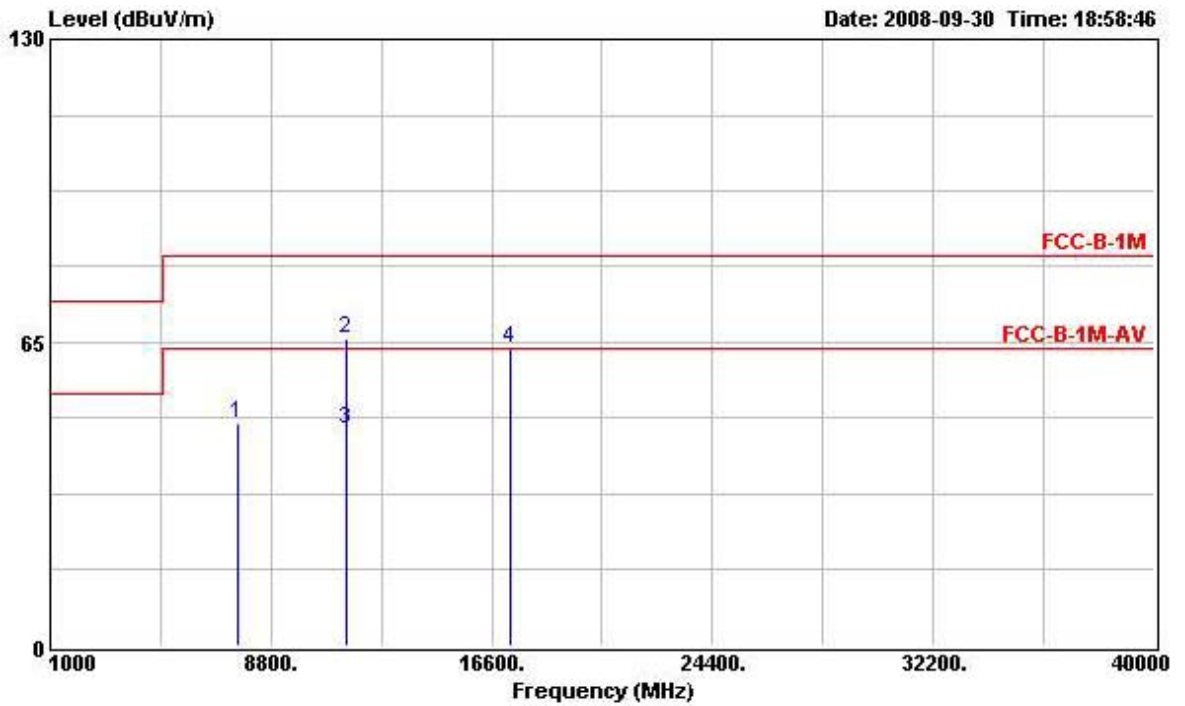
Test date	Sep. 30, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	5745MHz

Horizontal



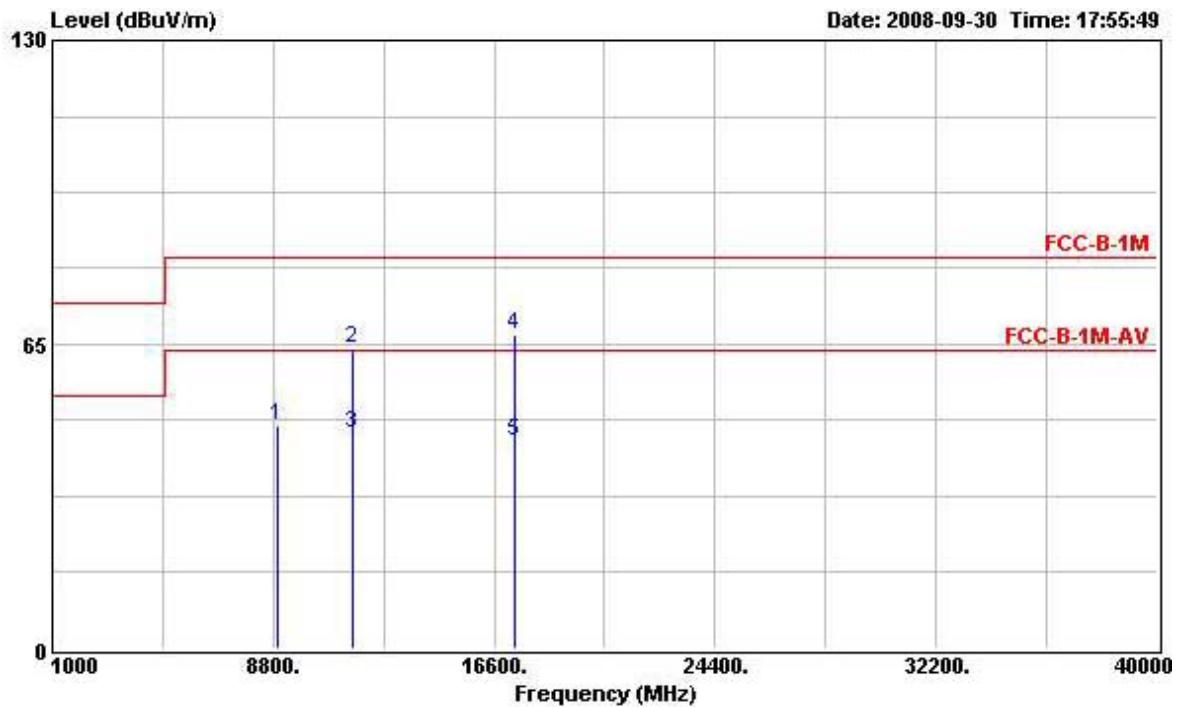
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBUV/m	dB	dBUV/m	dBUV	dB	dB	dB		cm	deg
1	8776.000	48.17	-35.37	83.54	46.07	37.56	0.00	35.46	Peak	---	---
2	11492.000	61.05	-22.49	83.54	56.57	39.47	0.00	34.99	Peak	---	---
3	11492.000	42.06	-21.48	63.54	37.58	39.47	0.00	34.99	Average	---	---
4	17232.000	66.75	-16.79	83.54	58.78	42.07	0.00	34.10	Peak	---	---

Vertical



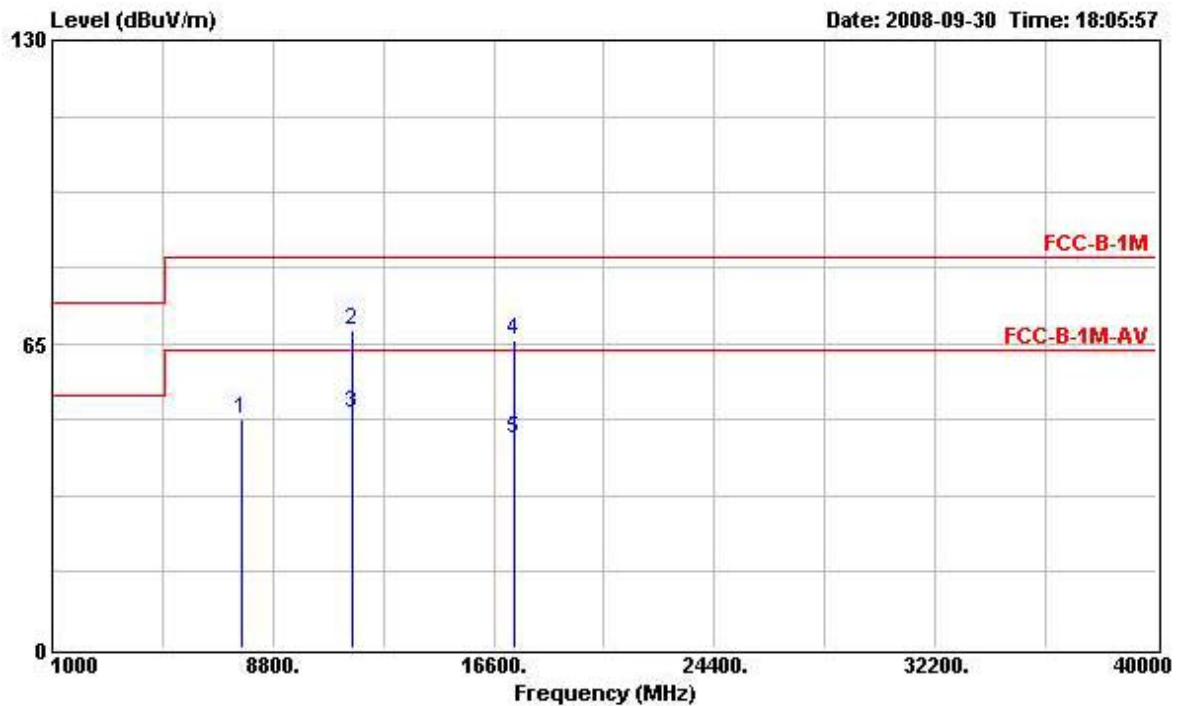
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	7660.000	47.64	-15.90	63.54	46.23	36.77	0.00	35.36	Average	---	---
2	11492.000	65.67	-17.87	83.54	61.19	39.47	0.00	34.99	Peak	---	---
3	11492.000	46.33	-17.21	63.54	41.85	39.47	0.00	34.99	Average	---	---
4	17228.000	63.66	-19.88	83.54	55.70	42.07	0.00	34.11	Peak	---	---

Test date	Sep. 30, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	5785MHz

Horizontal

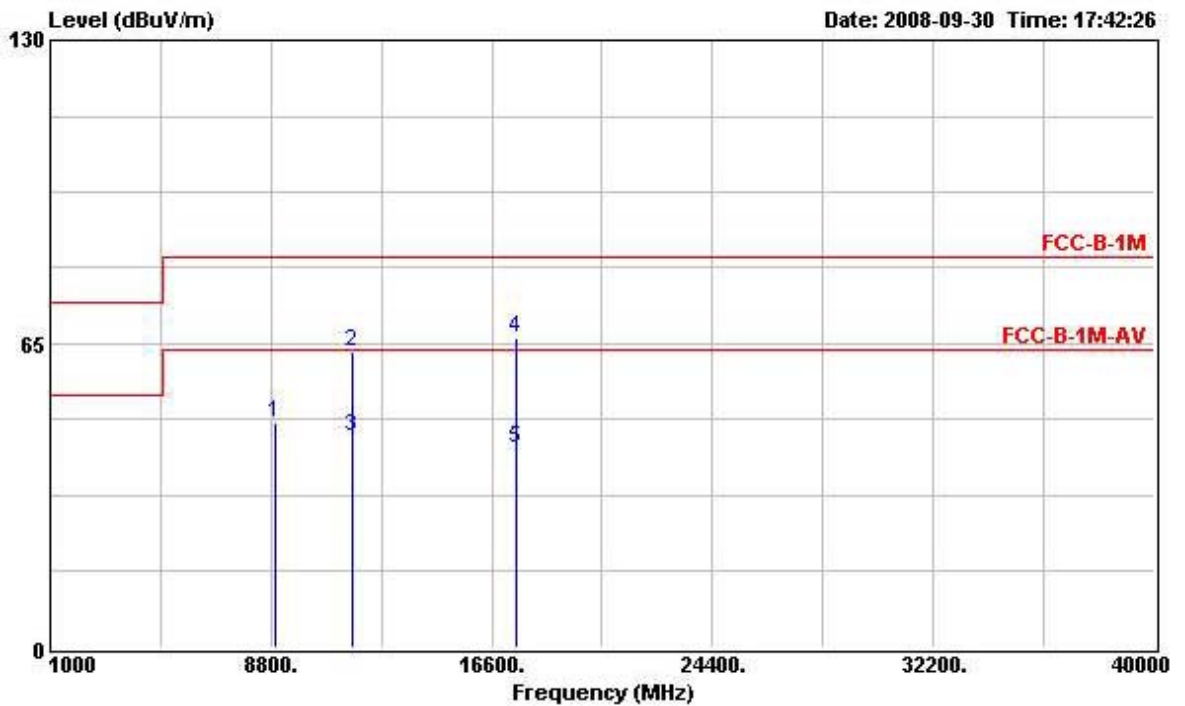
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	8952.000	47.83	-35.71	83.54	45.65	37.67	0.00	35.49	Peak	---	---
2	11570.000	63.98	-19.56	83.54	59.47	39.56	0.00	35.05	Peak	---	---
3	11570.000	45.84	-17.70	63.54	41.33	39.56	0.00	35.05	Average	---	---
4	17355.000	66.98	-16.56	83.54	58.39	42.65	0.00	34.06	Peak	---	---
5	17355.000	44.30	-19.24	63.54	35.71	42.65	0.00	34.06	Average	---	---

Vertical



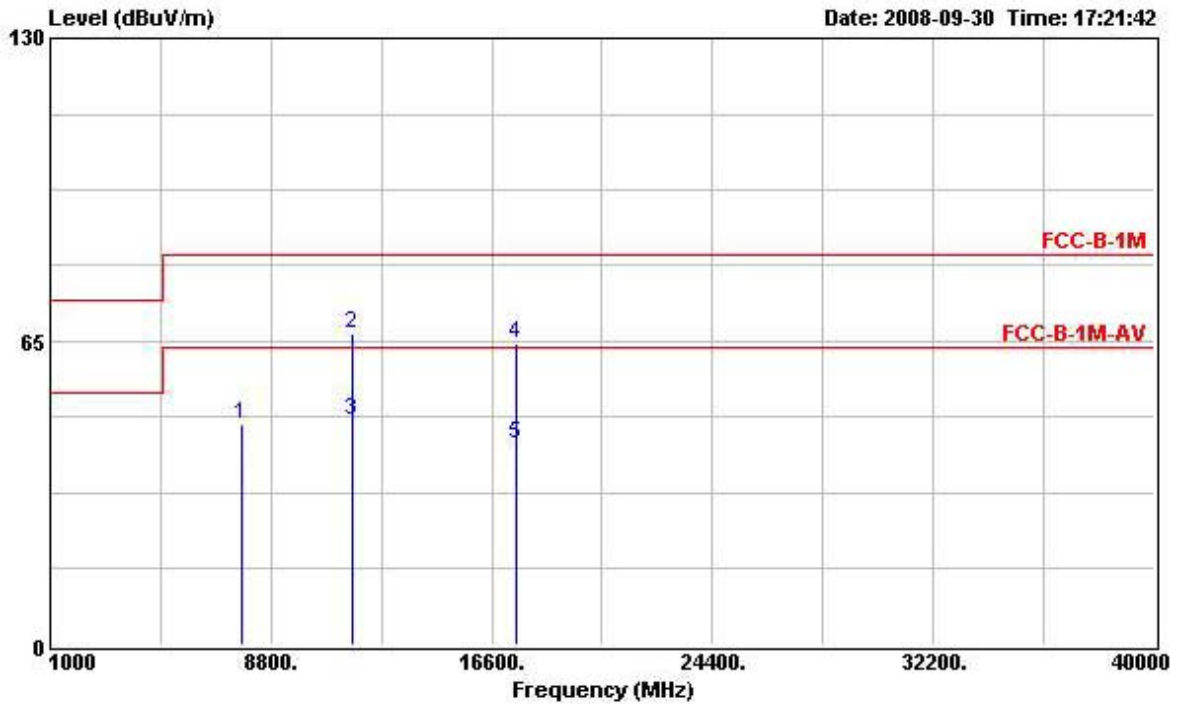
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	7712.000	49.05	-34.49	83.54	47.64	36.79	0.00	35.38	Peak	---	---
2	11570.000	68.06	-15.48	83.54	63.55	39.56	0.00	35.05	Peak	---	---
3	11570.000	50.04	-13.50	63.54	45.53	39.56	0.00	35.05	Average	---	---
4	17355.000	65.91	-17.63	83.54	57.32	42.65	0.00	34.06	Peak	---	---
5	17355.000	44.59	-18.95	63.54	36.00	42.65	0.00	34.06	Average	---	---

Test date	Sep. 30, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	5825MHz

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	8968.000	47.91	-35.63	83.54	45.72	37.68	0.00	35.49	Peak	---	---
2	11650.000	63.25	-20.29	83.54	58.73	39.61	0.00	35.09	Peak	---	---
3	11650.000	45.37	-18.17	63.54	40.85	39.61	0.00	35.09	Average	---	---
4	17475.000	66.22	-17.32	83.54	57.00	43.23	0.00	34.01	Peak	---	---
5	17475.000	42.61	-20.93	63.54	33.39	43.23	0.00	34.01	Average	---	---

Vertical

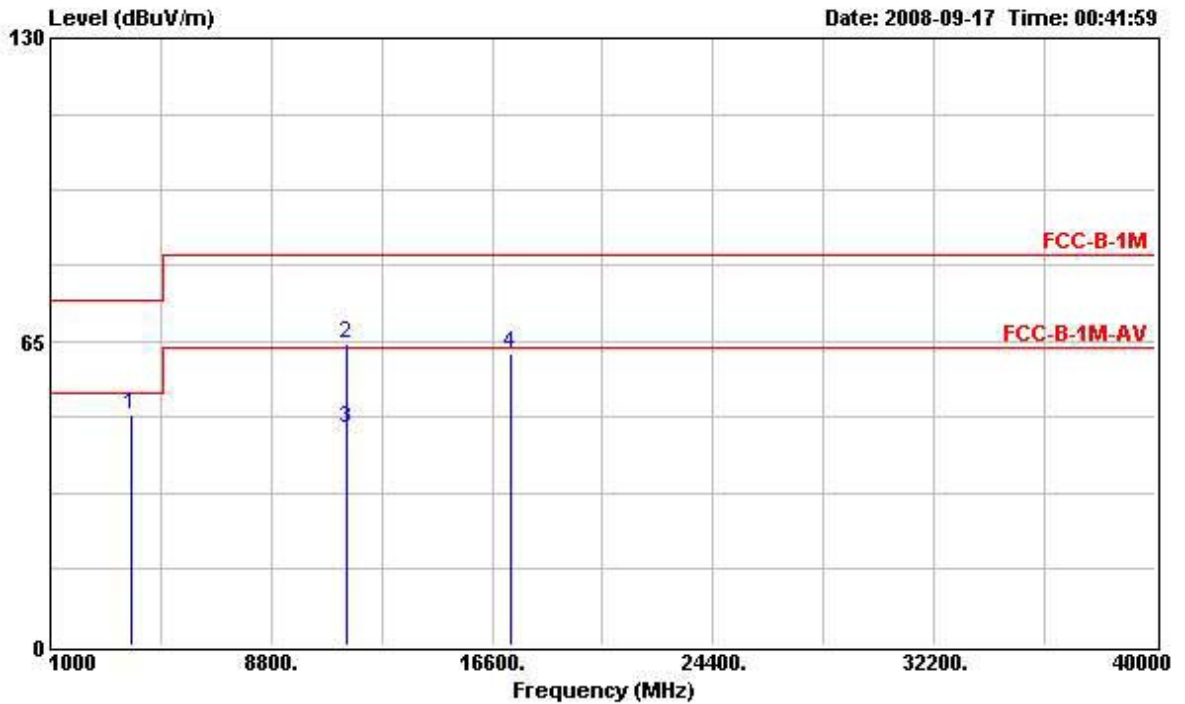


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	7768.000	47.40	-36.14	83.54	45.99	36.81	0.00	35.40	Peak	---	---
2	11650.000	66.89	-16.65	83.54	62.37	39.61	0.00	35.09	Peak	---	---
3	11650.000	48.22	-15.32	63.54	43.70	39.61	0.00	35.09	Average	---	---
4	17475.000	64.49	-19.05	83.54	55.27	43.23	0.00	34.01	Peak	---	---
5	17475.000	42.96	-20.58	63.54	33.74	43.23	0.00	34.01	Average	---	---

Dipole Ant. (White)

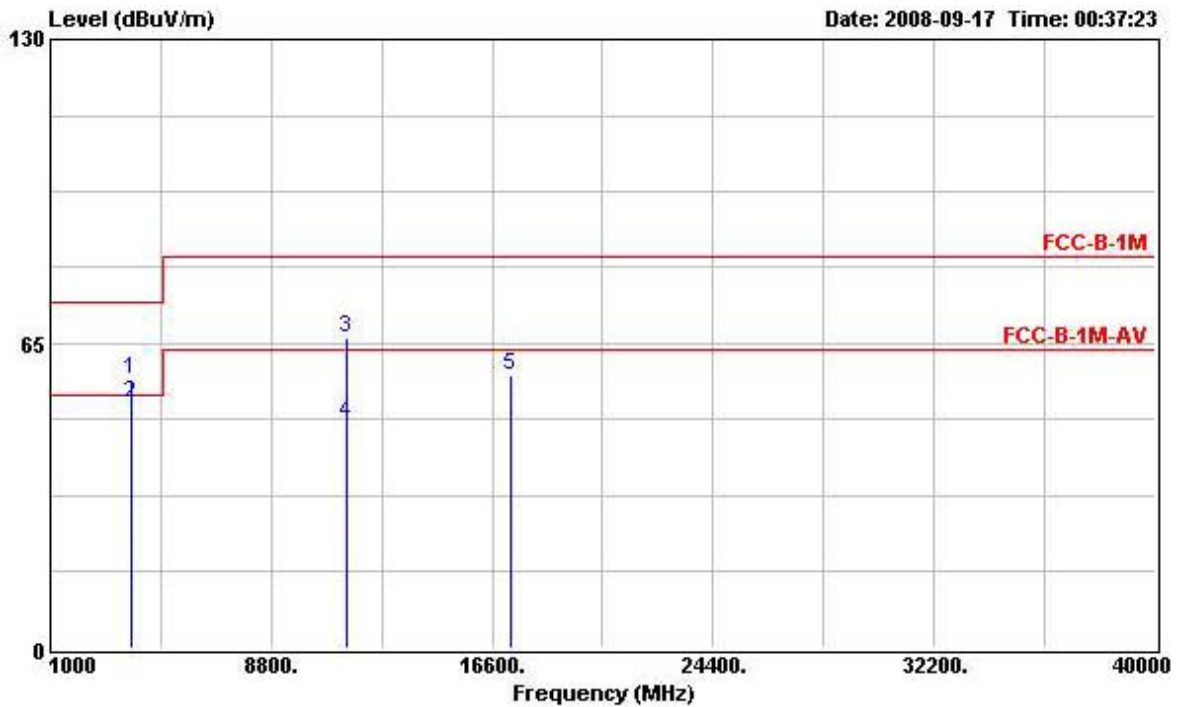
Test date	Sep. 17, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	5745MHz

Horizontal



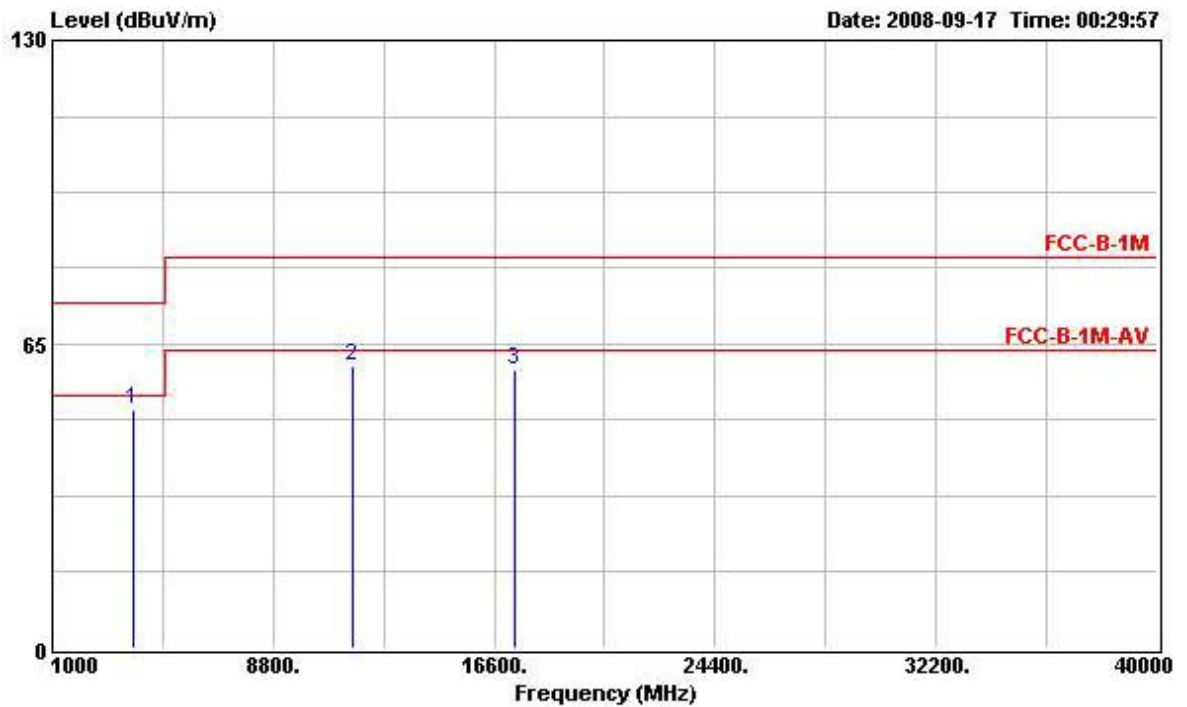
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3835.000	49.38	-24.62	74.00	52.21	32.17	0.00	35.00	Peak	---	---
2	11492.000	64.48	-19.06	83.54	60.00	39.47	0.00	34.99	Peak	---	---
3	11492.000	46.59	-16.95	63.54	42.11	39.47	0.00	34.99	Average	---	---
4	17235.000	62.65	-20.89	83.54	54.68	42.07	0.00	34.10	Peak	---	---

Vertical



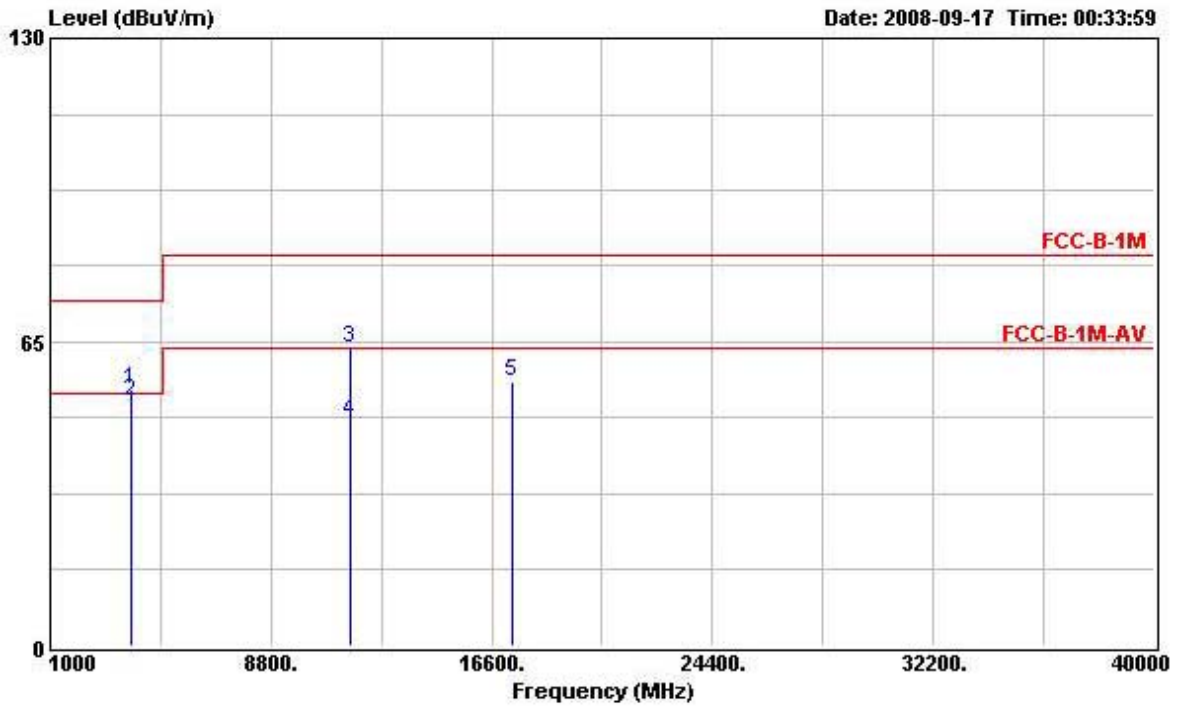
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3835.000	57.43	-16.57	74.00	60.26	32.17	0.00	35.00	Peak	---	---
2	3835.000	52.31	-1.69	54.00	55.14	32.17	0.00	35.00	Average	---	---
3	11492.000	66.24	-17.30	83.54	61.76	39.47	0.00	34.99	Peak	---	---
4	11492.000	48.18	-15.36	63.54	43.70	39.47	0.00	34.99	Average	---	---
5	17235.000	58.34	-25.20	83.54	50.37	42.07	0.00	34.10	Peak	---	---

Test date	Sep. 17, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	5785MHz

Horizontal

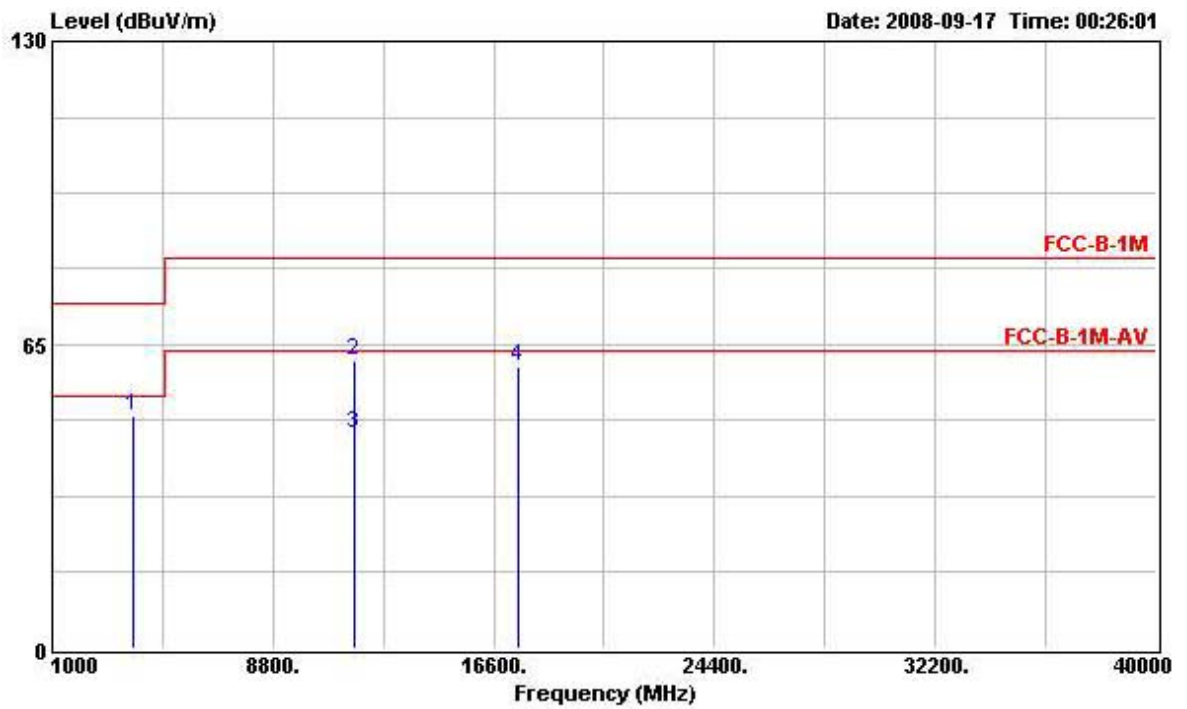
	Freq	Level	Over	Limit	Read	Probe	Cable	Preamp		Ant	Table
	MHz	dBUV/m	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
			dB	dBUV/m	dBUV	dB	dB	dB		cm	deg
1	3856.000	50.95	-23.05	74.00	53.74	32.21	0.00	35.00	Peak	---	---
2	11576.000	60.25	-23.29	83.54	55.74	39.56	0.00	35.05	Peak	---	---
3	17355.000	59.72	-23.82	83.54	51.13	42.65	0.00	34.06	Peak	---	---

Vertical



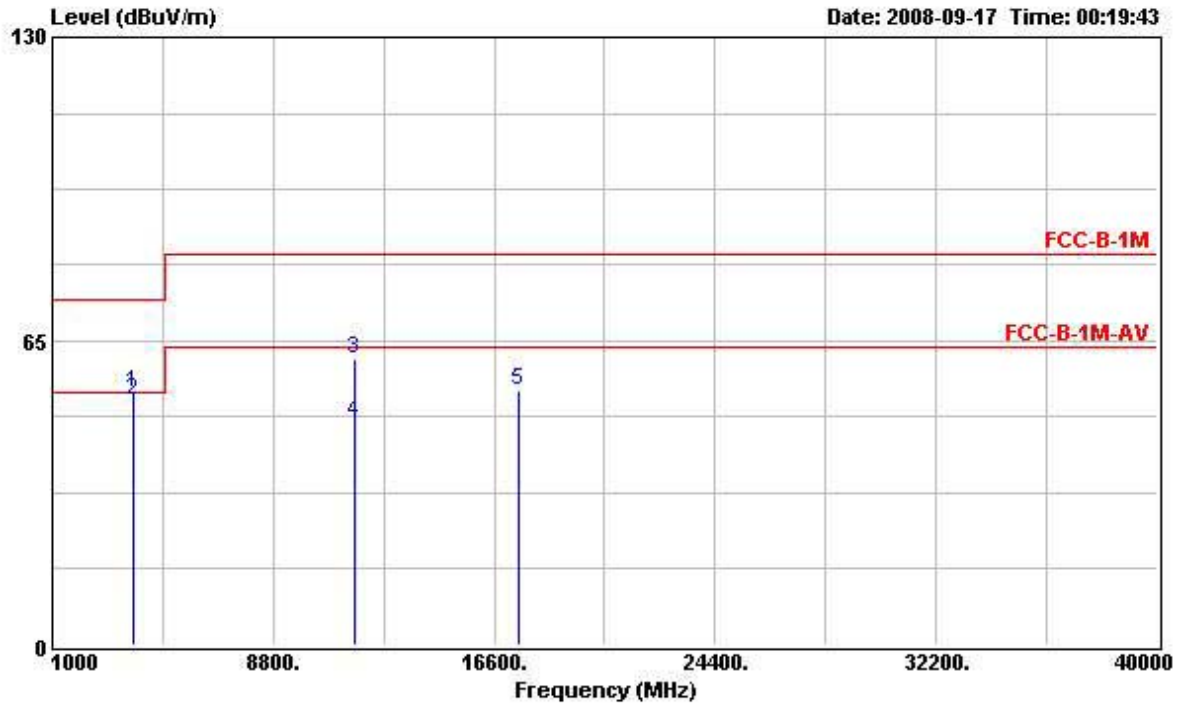
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3858.000	54.76	-19.24	74.00	57.55	32.21	0.00	35.00	Peak	---	---
2	3858.000	52.39	-1.61	54.00	55.18	32.21	0.00	35.00	Average	---	---
3	11572.000	63.88	-19.66	83.54	59.37	39.56	0.00	35.05	Peak	---	---
4	11572.000	48.13	-15.41	63.54	43.62	39.56	0.00	35.05	Average	---	---
5	17355.000	56.39	-27.15	83.54	47.80	42.65	0.00	34.06	Peak	---	---

Test date	Sep. 17, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	5825MHz

Horizontal

	Freq	Level	Over	Limit	Read	Probe	Cable	Preamp		Ant	Table
	MHz	dBUV/m	Limit	Line	Level	Factor	Loss	Factor	Remark	Pos	Pos
			dB	dBUV/m	dBUV	dB	dB	dB		cm	deg
1	3884.600	49.67	-24.33	74.00	52.36	32.31	0.00	35.00	Peak	---	---
2	11652.000	61.56	-21.98	83.54	57.03	39.62	0.00	35.09	Peak	---	---
3	11652.000	45.82	-17.72	63.54	41.29	39.62	0.00	35.09	Average	---	---
4	17472.000	60.46	-23.08	83.54	51.24	43.23	0.00	34.01	Peak	---	---

Vertical

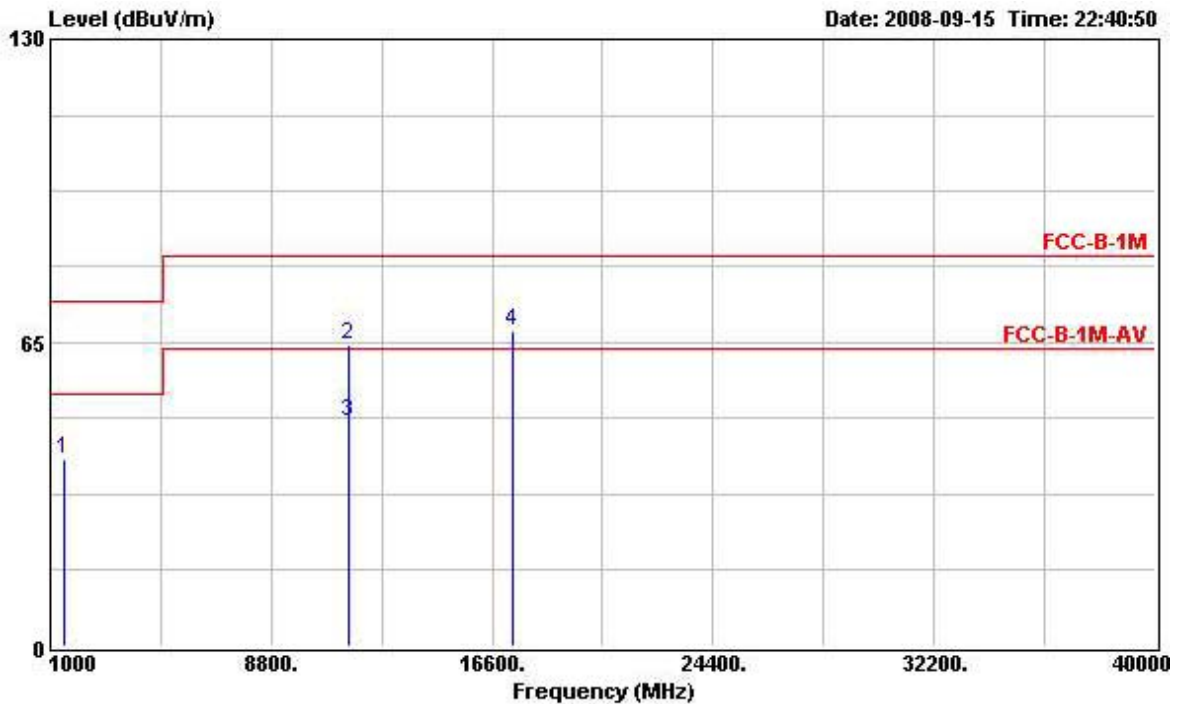


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3884.600	54.20	-19.80	74.00	56.89	32.31	0.00	35.00	Peak	---	---
2	3884.600	52.23	-1.77	54.00	54.92	32.31	0.00	35.00	Average	---	---
3	11652.000	61.12	-22.42	83.54	56.59	39.62	0.00	35.09	Peak	---	---
4	11652.000	47.73	-15.81	63.54	43.20	39.62	0.00	35.09	Average	---	---
5	17475.000	54.60	-28.94	83.54	45.38	43.23	0.00	34.01	Peak	---	---

Chip Ant.

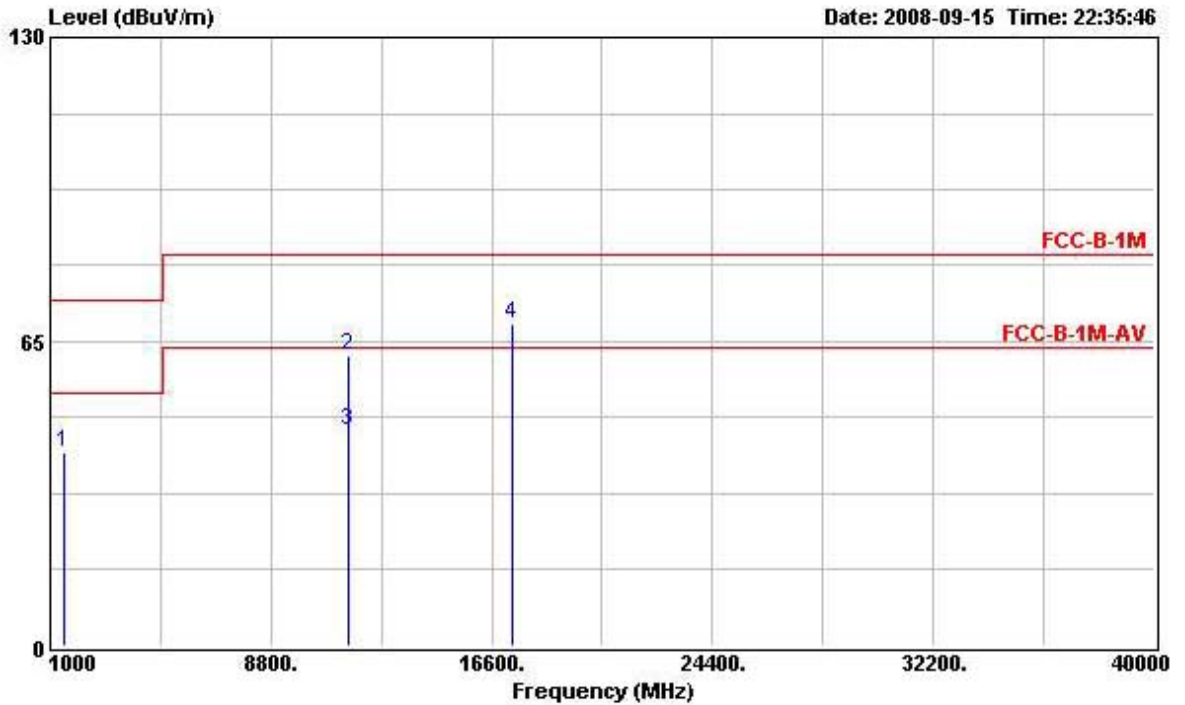
Test date	Sep. 15, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	5745MHz

Horizontal



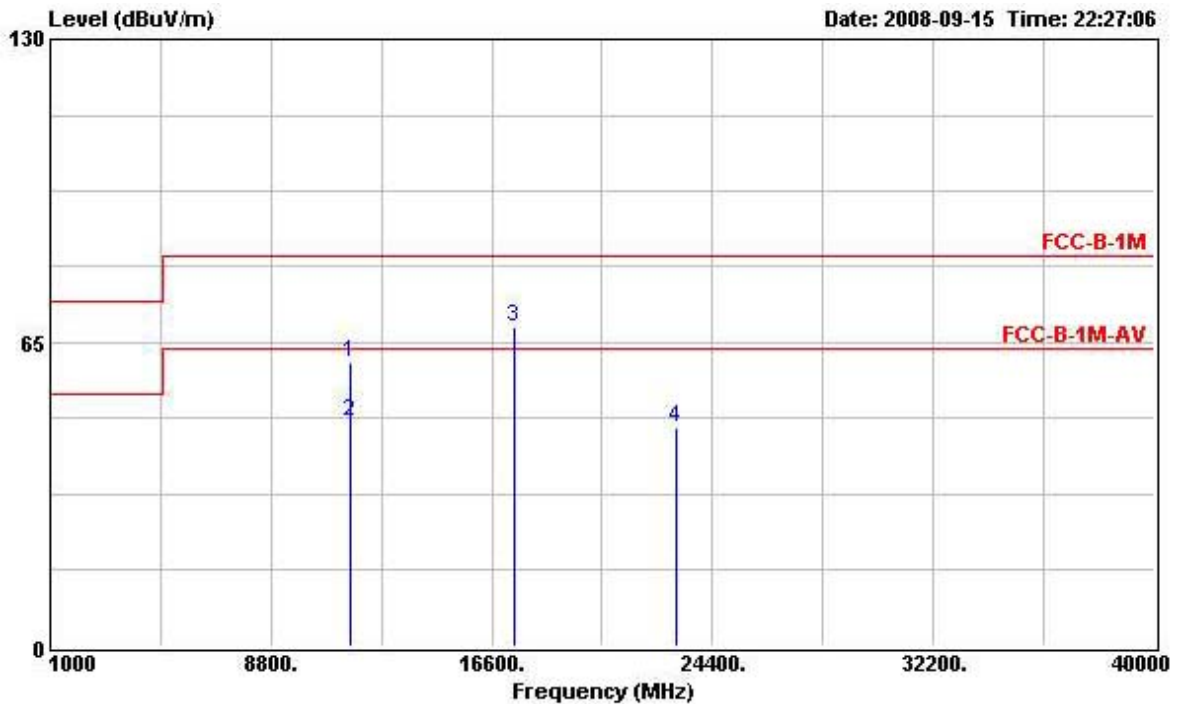
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	1498.000	39.95	-14.05	54.00	49.55	25.30	0.00	34.90	Average	---	---
2	11568.000	64.44	-19.10	83.54	59.91	39.56	0.00	35.03	Peak	---	---
3	11568.000	48.29	-15.25	63.54	43.76	39.56	0.00	35.03	Average	---	---
4	17354.000	67.56	-15.98	83.54	58.97	42.65	0.00	34.06	Peak	---	---

Vertical



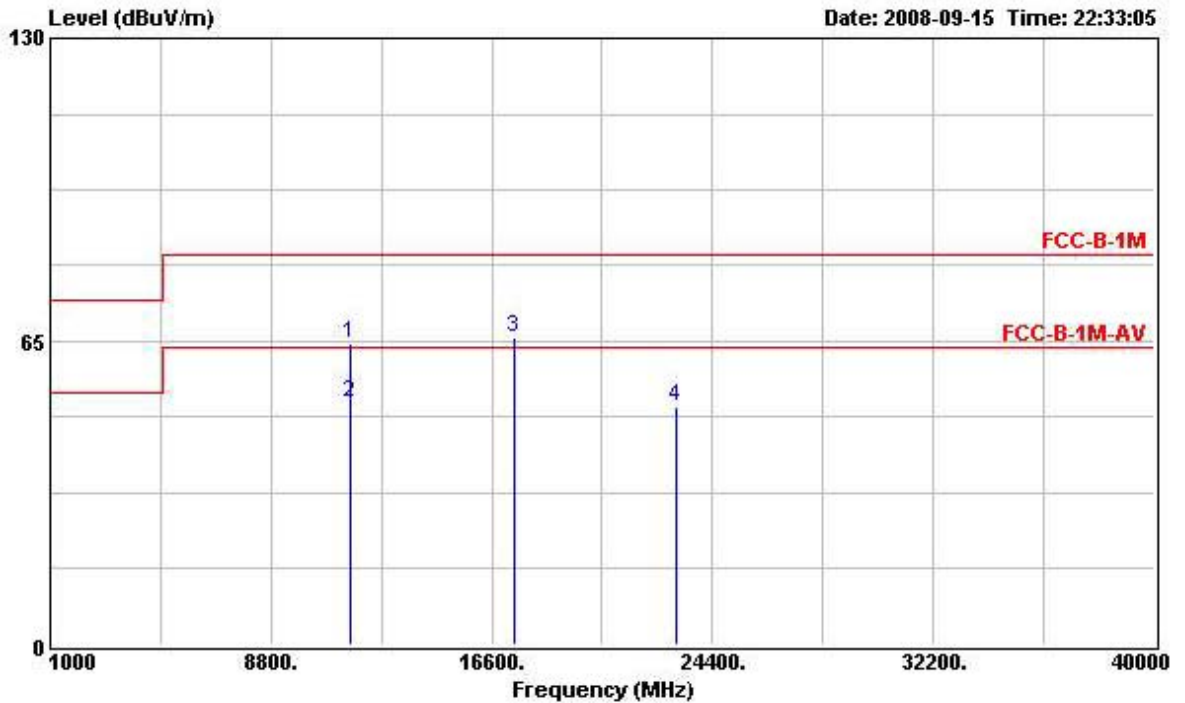
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	1497.000	41.56	-32.44	74.00	51.20	25.30	0.00	34.94	Peak	---	---
2	11568.000	62.09	-21.45	83.54	57.56	39.56	0.00	35.03	Peak	---	---
3	11568.000	46.15	-37.39	83.54	41.62	39.56	0.00	35.03	Peak	---	---
4	17352.000	68.76	-14.78	83.54	60.17	42.65	0.00	34.06	Peak	---	---

Test date	Sep. 15, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	5785MHz

Horizontal

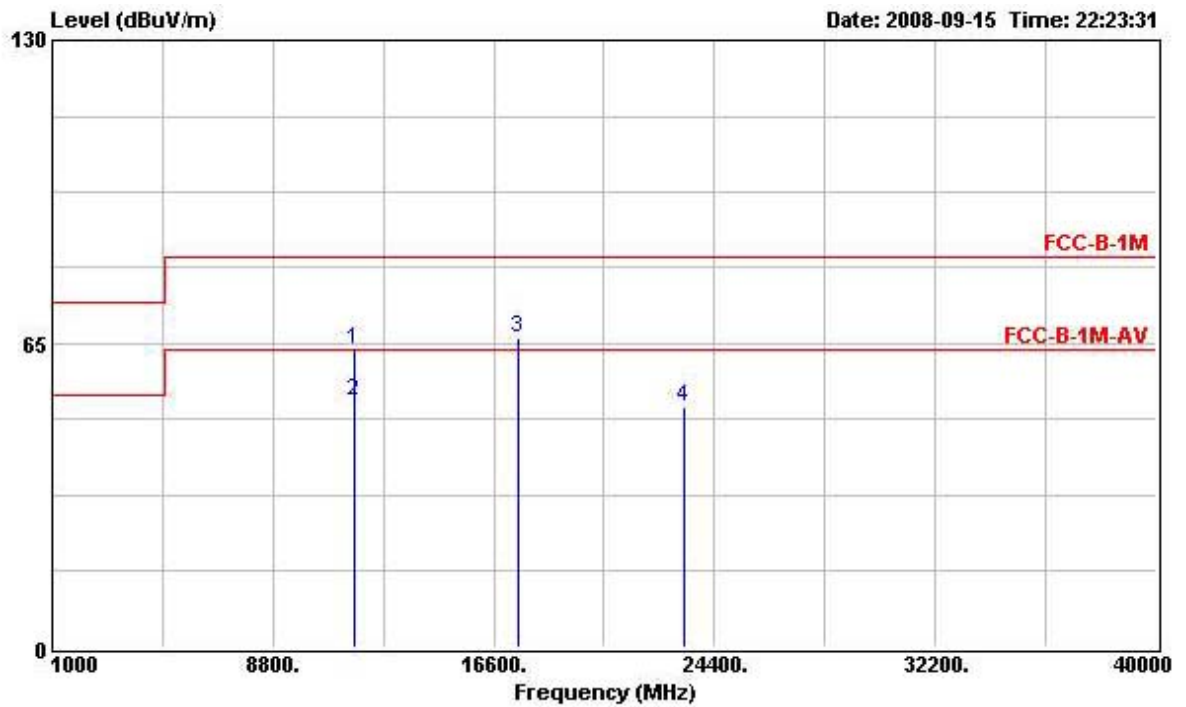
	Freq	Level	Over	Limit	Read	Probe	Cable	Preamp	Remark	Ant	Table
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor		Pos	Pos
			dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	11612.000	60.75	-22.79	83.54	56.23	39.58	0.00	35.06	Peak	---	---
2	11612.000	48.29	-15.25	63.54	43.77	39.58	0.00	35.06	Average	---	---
3	17416.000	68.48	-15.06	83.54	59.53	42.98	0.00	34.03	Peak	---	---
4	23140.000	46.96	-36.58	83.54	581.58	500.00	0.00	34.62	Peak	---	---

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	11608.000	64.60	-18.94	83.54	60.08	39.58	0.00	35.06	Peak	---	---
2	11608.000	51.80	-11.74	63.54	47.28	39.58	0.00	35.06	Average	---	---
3	17418.000	65.78	-17.76	83.54	56.83	42.98	0.00	34.03	Peak	---	---
4	23140.000	51.24	-32.30	83.54	585.86	-500.00	0.00	34.62	Peak	---	---

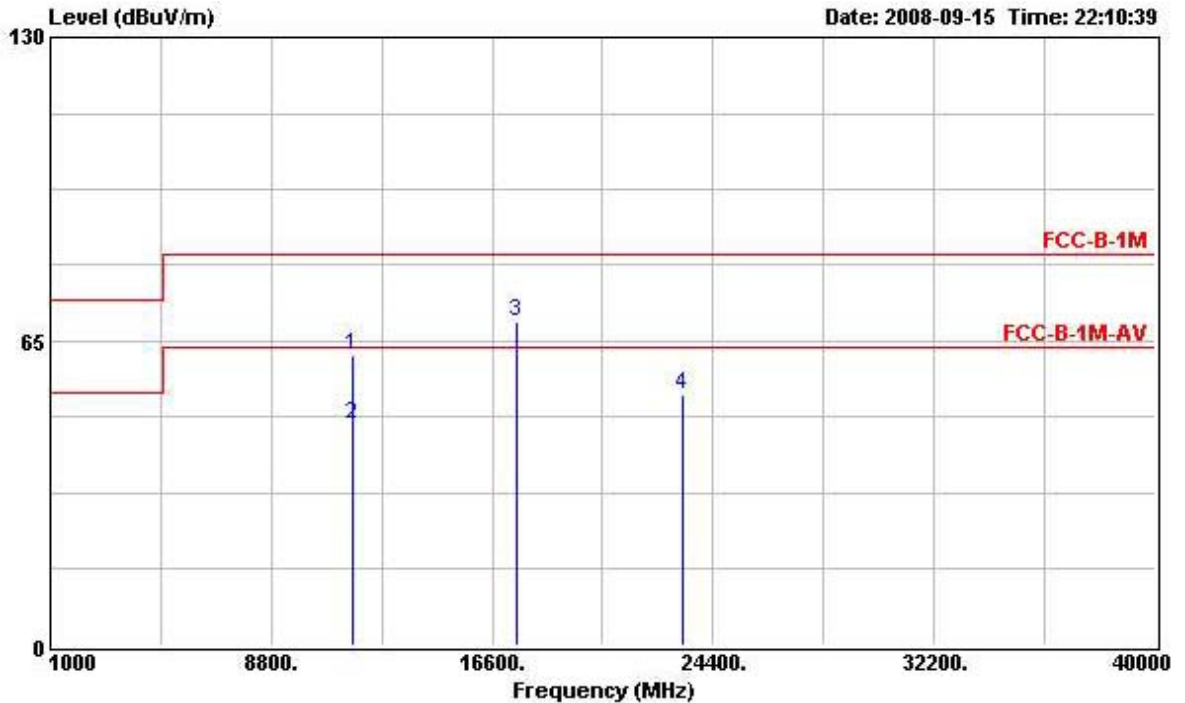
Test date	Sep. 15, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	5825MHz

Horizontal

Copyright © 2008 SPORTON International Inc. All rights reserved.

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	11648.000	63.84	-19.70	83.54	59.32	39.61	0.00	35.09	Peak	---	---
2	11648.000	52.77	-10.77	63.54	48.25	39.61	0.00	35.09	Average	---	---
3	17468.000	66.34	-17.20	83.54	57.12	43.23	0.00	34.01	Peak	---	---
4	23300.000	51.29	-12.25	63.54	585.65-500.00		0.00	34.36	Average	---	---

Vertical



	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	11648.000	62.15	-21.39	83.54	57.63	39.61	0.00	35.09	Peak	---	---
2	11648.000	47.38	-16.16	63.54	42.86	39.61	0.00	35.09	Average	---	---
3	17480.000	69.16	-14.38	83.54	59.94	43.23	0.00	34.01	Peak	---	---
4	23300.000	53.75	-29.79	83.54	588.11	500.00	0.00	34.36	Peak	---	---

Note:

The amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

3.6 Band Edge and Fundamental Emissions Measurement

3.6.1 Limit

20dBc in any 100 kHz 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.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

3.6.2 Measuring Instruments and Setting

Please refer to section 4 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	100 MHz
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (Emission in non-restricted band)	100 KHz /100 KHz for Peak

3.6.3 Test Procedures

1. The test procedure is the same as section 3.5.3, only the frequency range investigated is limited to 100MHz around bandedges.
2. In case the emission is fail due to the used RB/VB is too wide, marker-delta method of FCC Public Notice DA00-705 will be followed.

3.6.4 Test Setup Layout

This test setup layout is the same as that shown in section 3.5.4.

3.6.5 Test Deviation

There is no deviation with the original standard.

3.6.6 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

3.6.7 Test Result of Band Edge and Fundamental Emissions

2.4G Band

Dipole Ant. (Black)

Test date	Oct. 27, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	2417MHz,2427MHz, 2467MHz

2417MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	2389.420	57.12	-16.88	74.00	25.91	28.21	3.00	0.00	Peak	---	---
2 X	2418.300	113.28			82.00	28.26	3.02	0.00	Peak	---	---
1	2363.010	44.99	-9.01	54.00	13.90	28.11	2.98	0.00	Average	---	---
2 X	2417.540	88.60			57.32	28.26	3.02	0.00	Average	---	---

An item 2 is Fundamental Emissions.

2427MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1 X	2426.850	111.97			80.64	28.31	3.02	0.00	Peak	---	---
1 X	2428.370	84.36			53.03	28.31	3.02	0.00	Average	---	---

An item 1 is Fundamental Emissions.

2467MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1 X	2468.460	111.68			80.22	28.40	3.06	0.00	Peak	---	---
2	2483.850	70.13	-3.87	74.00	38.62	28.45	3.06	0.00	Peak	---	---
1 X	2466.370	87.62			56.16	28.40	3.06	0.00	Average	---	---
2	2483.500	49.08	-4.92	54.00	17.57	28.45	3.06	0.00	Average	---	---

An item 1 is Fundamental Emissions.

Dipole Ant. (White)

Test date	Oct. 27, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	2417MHz,2427MHz, 2467MHz

2417MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	2390.000	60.23	-13.77	74.00	32.02	28.21	0.00	0.00	Peak	---	---
2 X	2418.300	113.29			85.03	28.26	0.00	0.00	Peak	---	---
1	2362.820	43.62	-10.38	54.00	15.51	28.11	0.00	0.00	Average	---	---
2 X	2418.300	87.96			59.70	28.26	0.00	0.00	Average	---	---

An item 2 is Fundamental Emissions.

2427MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1 X	2428.370	114.80			83.47	28.31	3.02	0.00	Peak	---	---
1 X	2426.090	105.42			74.09	28.31	3.02	0.00	Average	---	---

An item 2 is Fundamental Emissions.

2467MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1 X	2468.460	110.66			79.20	28.40	3.06	0.00	Peak	---	---
2	2483.500	70.79	-3.21	74.00	39.28	28.45	3.06	0.00	Peak	---	---
1 X	2468.460	85.53			54.07	28.40	3.06	0.00	Average	---	---
2	2483.500	46.62	-27.38	74.00	15.11	28.45	3.06	0.00	Average	---	---

An item 1 is Fundamental Emissions.

Chip Ant.

Test date	Oct. 27, 2008	Test Site No.	03CH02-HY
Temperature	26	Humidity	52.6%
Test Engineer	Sam	Configuration	2417MHz,2427MHz, 2467MHz

2417MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	2359.970	57.80	-16.20	74.00	26.71	28.11	2.98	0.00	Peak	---	---
2 X	2418.300	108.29			77.01	28.26	3.02	0.00	Peak	---	---
1	2379.540	44.14	-9.86	54.00	12.98	28.16	3.00	0.00	Average	---	---
2 X	2417.730	84.80			53.52	28.26	3.02	0.00	Average	---	---

An item 2 is Fundamental Emissions.

2427MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1 X	2428.370	108.48			77.15	28.31	3.02	0.00	Peak	---	---
1 X	2427.420	82.07			50.74	28.31	3.02	0.00	Average	---	---

An item 2 is Fundamental Emissions.

2467MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1 X	2468.460	107.43			75.97	28.40	3.06	0.00	Peak	---	---
2	2483.500	66.49	-7.51	74.00	34.98	28.45	3.06	0.00	Peak	---	---
1 X	2467.700	84.30			52.84	28.40	3.06	0.00	Average	---	---
2	2483.500	47.58	-6.42	54.00	16.07	28.45	3.06	0.00	Average	---	---

An item 1 is Fundamental Emissions.

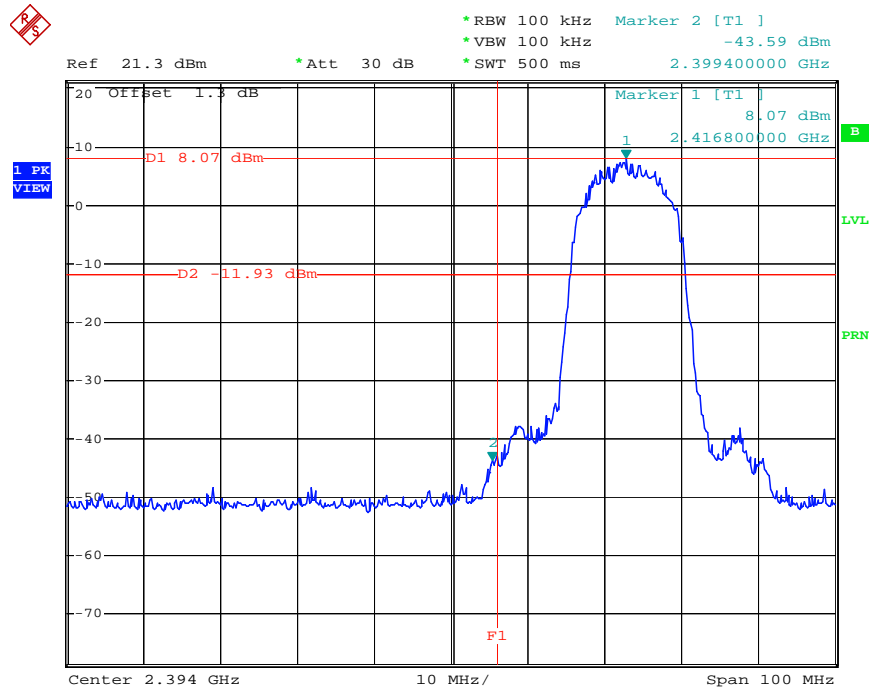
Note:

Emission level (dBuV/m) = 20 log Emission level (uV/m).

Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.

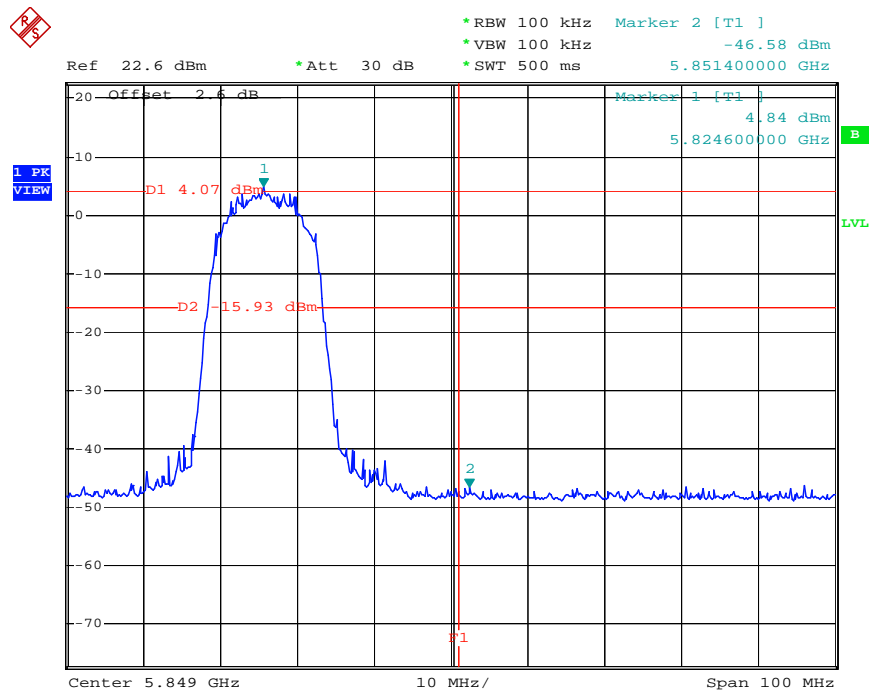
For Emission not in Restricted Band

Low Band Edge Plot on Configuration 2.4G Band / 2417 MHz



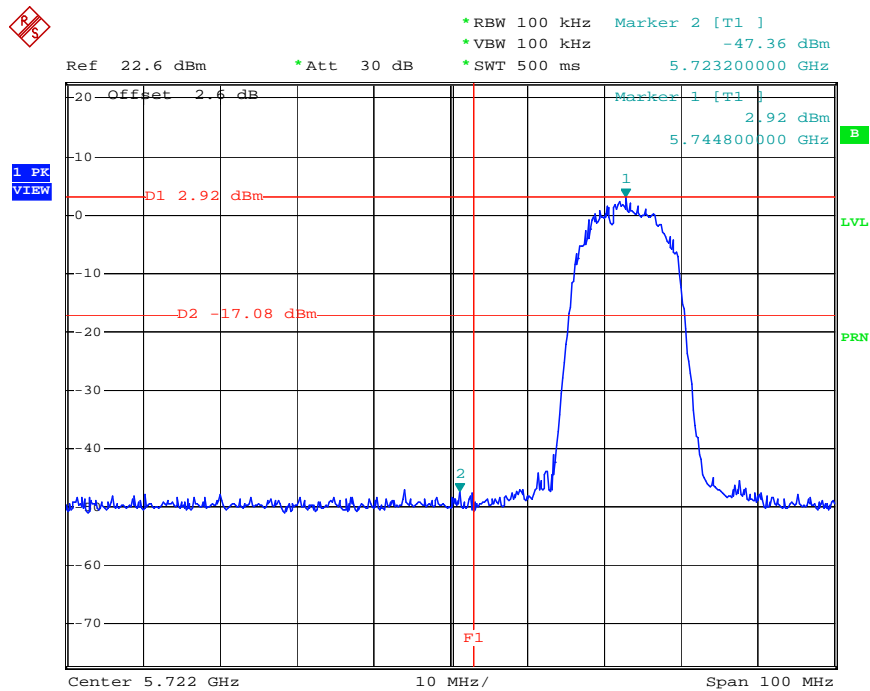
Date: 27.OCT.2008 14:25:11

High Band Edge Plot on Configuration 2.4G Band / 2467 MHz



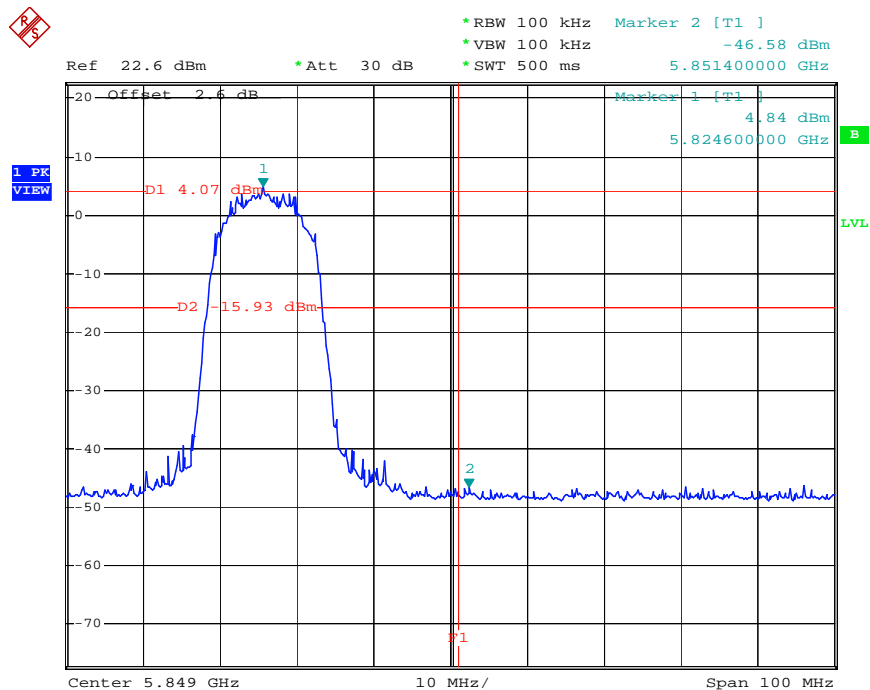
Date: 27.OCT.2008 15:16:42

Low Band Edge Plot on Configuration 5G Band / 5745 MHz



Date: 27.OCT.2008 14:58:35

High Band Edge Plot on Configuration 5G Band / 5825 MHz



Date: 27.OCT.2008 15:16:42

3.7 Antenna Requirements

3.7.1 Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. 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 shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited.

3.7.2 Antenna Connector Construction

Please refer to section 2.2 in this test report; antenna connector complied with the requirements.

4 LIST OF MEASURING EQUIPMENTS

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100132	9kHz – 2.75GHz	Jul. 24, 2008	Conduction (CO01-HY)
LISN	MessTec	NNB-2/16Z	2001/004	9kHz – 30MHz	Mar. 24, 2008	Conduction (CO01-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	2001/009	9kHz – 30MHz	Mar. 13, 2008	Conduction (CO01-HY)
EMI Filter	LINDGREN	LRE-2060	1004	< 450Hz	N/A	Conduction (CO01-HY)
EMI Filter	LINDGREN	N6006	201052	0 – 60Hz	N/A	Conduction (CO01-HY)
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832010001	9kHz – 30MHz	May 07, 2008	Conduction (CO01-HY)
Isolation Transformer	Erika Fiedler OHG	D-65396 Walluf	58	45MHz-2.15GHz	N/A	Conduction (CO01-HY)

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH02-HY	30 MHz - 1 GHz 3m	May 12, 2008	Radiation (03CH02-HY)
Amplifier	ADVANTEST	BB525C	CH300001	9 kHz - 2 GHz	Dec. 05, 2007	Radiation (03CH02-HY)
Spectrum Analyzer	R&S	FSP40	100305/040	9 kHz - 40GHz	Jan. 10, 2008	Radiation (03CH02-HY)
Bilog Antenna	SCHAFFNER	CBL61128	2723	30 MHz - 2 GHz	Dec. 22, 2007	Radiation (03CH02-HY)
Turn Table	HD	DS 420	420/649/00	0 - 360 degree	N/A	Radiation (03CH02-HY)
Antenna Mast	HD	MA 240	240/559/00	1 m - 4 m	N/A	Radiation (03CH02-HY)
RF Cable-R03m	Jye Bao	RG142	CB020	30 MHz - 1 GHz	Dec. 08, 2007	Radiation (03CH02-HY)
Amplifier	Agilent	8449B	3008A02373	1GHz – 26.5 GHz	Jul. 16, 2008	Radiation (03CH02-HY)
Horn Antenna	EMCO	3115	6903	1GHz~18GHz	Apr. 21, 2008	Radiation (03CH02-HY)
RF Cable-HIGH	SUHNER	SUCOFLEX106	03CH02-HY	1GHz~40GHz	Dec. 12, 2007	Radiation (03CH02-HY)

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Spectrum Analyzer	R&S	FSP30	100023	9kHz ~ 30GHz	Jan. 10, 2008	Conducted (TH01-HY)
Power Meter	R&S	NRVS	100444	DC ~ 40GHz	Jul. 11, 2008	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z51	100458	DC ~ 30GHz	Jul. 11, 2008	Conducted (TH01-HY)
Power Sensor	R&S	NRV-Z32	100057	30MHz ~ 6GHz	Jul. 11, 2008	Conducted (TH01-HY)
DC Power Source	G.W.	GPC-6030D	C671845	DC 1V ~ 60V	Mar. 13, 2008	Conducted (TH01-HY)
Temp. and Humidity Chamber	Giant Force	GTH-225-20-S	MAB0103-001	N/A	Jul. 18, 2008	Conducted (TH01-HY)
RF CABLE-1m	Jye Bao	RG142	CB034-1m	20MHz ~ 7GHz	Dec. 01, 2007	Conducted (TH01-HY)
RF CABLE-2m	Jye Bao	RG142	CB035-2m	20MHz ~ 1GHz	Dec. 01, 2007	Conducted (TH01-HY)
Vector Signal Generator	R&S	SMU200A	102098	100kHz ~ 6GHz	Nov. 14, 2007	Conducted (TH01-HY)
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Mar. 10, 2008	Conducted (TH01-HY)
Oscilloscope	Tektonix	TDS380	B016197	400MHz/ 2GS/s	Jun. 27, 2008	Conducted (TH01-HY)

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
AC Power Source	HPC	HPA-500W	HPA-9100024	AC 0 ~ 300V	May 30, 2008*	Conducted (TH01-HY)

Note: Calibration Interval of instruments listed above is two year.

5 TEST LOCATION

SHIJR	ADD : 6Fl., No. 106, Sec. 1, Shintai 5th Rd., Shijr City, Taipei, Taiwan 221, R.O.C. TEL : 886-2-2696-2468 FAX : 886-2-2696-2255
HWA YA	ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL : 886-3-327-3456 FAX : 886-3-318-0055
LINKOU	ADD : No. 30-2, Dingfu Tsuen, Linkou Shiang, Taipei, Taiwan 244, R.O.C TEL : 886-2-2601-1640 FAX : 886-2-2601-1695
DUNGHU	ADD : No. 3, Lane 238, Kangle St., Neihu Chiu, Taipei, Taiwan 114, R.O.C. TEL : 886-2-2631-4739 FAX : 886-2-2631-9740
JUNGHE	ADD : 7Fl., No. 758, Jungjeng Rd., Junghe City, Taipei, Taiwan 235, R.O.C. TEL : 886-2-8227-2020 FAX : 886-2-8227-2626
NEIHU	ADD : 4Fl., No. 339, Hsin Hu 2 nd Rd., Taipei 114, Taiwan, R.O.C. TEL : 886-2-2794-8886 FAX : 886-2-2794-9777
JHUBEI	ADD : No.8, Lane 728, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

6 TAF CERTIFICATE OF ACCREDITATION


Certificate No. : L1190-070110

財團法人全國認證基金會
Taiwan Accreditation Foundation

Certificate of Accreditation

This is to certify that

Sporton International Inc.
EMC & Wireless Communications Laboratory
No.52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien,
Taiwan, R.O.C.

is accredited in respect of laboratory

Accreditation Criteria	: ISO/IEC 17025:2005
Accreditation Number	: 1190
Originally Accredited	: December 15, 2003
Effective Period	: January 10, 2007 to January 09, 2010
Accredited Scope	: Testing Field, see described in the Appendix
Specific Accreditation Program	: Accreditation Program for Designated Testing Laboratory for Commodities Inspection Accreditation Program for Telecommunication Equipment Testing Laboratory


Jay-San Chen
President, Taiwan Accreditation Foundation
Date : January 10, 2007

PI, total 9 pages

The Appendix forms an integral part of this Certificate, which shall be invalid when used without the Appendix.