FCC TEST REPORT

CATEGORY	:	Fixed
PRODUCT NAME	:	Wireless LAN PCI 802.11a/b/g Adapter
FCC ID.	:	PPQWN5401A
FILING TYPE	:	Certification
BRAND NAME	:	LITE-ON, HP
MODEL NAME	:	WN5401A, WN5401A-H1
APPLICANT	:	**LITE-ON TECHNOLOGY CORP.** 2F, No. 6, Lane 359, Sec. 2, Chung-Shan Rd., Chung-Ho, Taiwan, R.O.C.
MANUFACTURER	:	**DONGGUAN G-COM COMPUTER CO., LTD.** 1st Row Yin Shan Rd., Yin Hwu Industrial Area, Qingxi Town, Dong Guan City, Guang Dong, China
ISSUED BY	:	**SPORTON INTERNATIONAL INC.** 6F, No. 106, Sec. 1, Hsin Tai Wu Rd., His Chih, Taipei Hsien, Taiwan, R.O.C.

Statements:

Only the test result of 802.11a part is shown in this test report.

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.

Certificate or Test Report could not be used by the applicant to claim the product endorsement by CNLA, NVLAP or any agency of U.S. government.

The test equipment used to perform the test are calibrated and traceable to NML/ROC or NIST/USA.

1190

ILAC MRA

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Appendix A. Photographs of EUT ..... A1 ~ A18

History of this test report

Original Report Issue Date: Mar. 09, 2005

Report No.: FR522506

■ No additional attachment.

☐ Additional attachment were issued as following record:

Attachment No.	Issue Date	Description

CERTIFICATE OF COMPLIANCE

with

47 CFR FCC Part 15 Subpart C (Section 15.407)

PRODUCT NAME	:	Wireless LAN PCI 802.11a/b/g Adapter
BRAND NAME	:	LITE-ON, HP
MODEL NAME	:	WN5401A, WN5401A-H1
APPLICANT	:	**LITE-ON TECHNOLOGY CORP.** 2F, No. 6, Lane 359, Sec. 2, Chung-Shan Rd., Chung-Ho, Taiwan, R.O.C.
MANUFACTURER	:	**DONGGUAN G-COM COMPUTER CO., LTD.** 1st Row Yin Shan Rd., Yin Hwu Industrial Area, Qingxi Town, Dong Guan City, Guang Dong, China

I **HEREBY** CERTIFY THAT:

The measurements shown in this test report were made in accordance with the procedures given in ANSI C63.4 - 2003 and all test are performed according to 47 CFR FCC Part 15. Testing was carried out on Mar. 03, 2005 at SPORTON International Inc. LAB.

Dr. Alan Lane
Vice General Manager
Sporton International Inc.

1. General Description of Equipment under Test

1.1. Applicant

LITE-ON TECHNOLOGY CORP.
2F, No. 6, Lane 359, Sec. 2, Chung-Shan Rd., Chung-Ho, Taiwan, R.O.C.

1.2. Manufacturer

DONGGUAN G-COM COMPUTER CO., LTD.
1st Row Yin Shan Rd., Yin Hwu Industrial Area, Qingxi Town, Dong Guan City, Guang Dong, China

1.3. Basic Description of Equipment under Test

This product is a Wireless LAN PCI Adapter with 802.11a/b/g wireless solution. The technical data has been listed on section " Features of Equipment under Test ". 4 types of antenna were filed in this project.

1.4. Features of Equipment under Test

Items	Description
Type of Modulation	OFDM (16QAM / 64QAM / DQPSK / DBPSK)
Number of Channels	19
Frequency Band	5150MHz ~ 5250MHz, 5250MHz ~ 5350MHz 5725MHz ~ 5805MHz, 5210MHz ~ 5800MHz
Carrier Frequency	See section 1.6 for details
Data Rate	6, 12,18, 24,36, 48, 54, 108 Mbps
Channel Bandwidth	18MHz
Max. Conducted Output Power	See section 1.7 for details
Antenna Type	See section 1.5 for details
Communication Type	Half-Duplex
Testing Duty Cycle	100.00%
Power Rating (DC/AC, Voltage)	5 VDC (from host)
Test Power Source	110.00V AC (host)
Temperature Range (Operating)	0 ~ 45 °C

1.5. Antenna Description

No.	Brand Name	Model Name	Antenna Type	Antenna Connector	Gain (dBi)
1	JOYMAX	Embedded(Internal)	Patch Monopole	UFL	4.00
2	JOYMAX	Swivel(External)	Dipole Antenna	Revise-SMA	4.00
3	JOYMAX	Flying Lead(External)	Dipole Antenna	Revise-SMA	2.00
4	JOYMAX	Portable(External)	Dipole Antenna	Revise-SMA	1.50

1.6. Table for Carrier Frequencies

Normal Mode

Frequency Bands					
5150MHz ~ 5250MHz		**5250MHz ~ 5350MHz**		**5725MHz ~ 5825MHz**	
Channel	**Frequency**	**Channel**	**Frequency**	**Channel**	**Frequency**
36	5180 MHz	52	5260 MHz	100	5745 MHz
40	5200 MHz	56	5280 MHz	104	5765 MHz
44	5220 MHz	60	5300 MHz	108	5785 MHz
48	5240 MHz	64	5320 MHz	112	5805 MHz

Turbo Mode

Frequency Bands					
5150MHz ~ 5250MHz		**5250MHz ~ 5350MHz**		**5725MHz ~ 5825MHz**	
Channel	**Frequency**	**Channel**	**Frequency**	**Channel**	**Frequency**
42	5210 MHz	58	5290 MHz	103	5760 MHz
50	5250 MHz			108	5800 MHz

1.7. Table for Maximum Conducted Output Power

Normal Mode

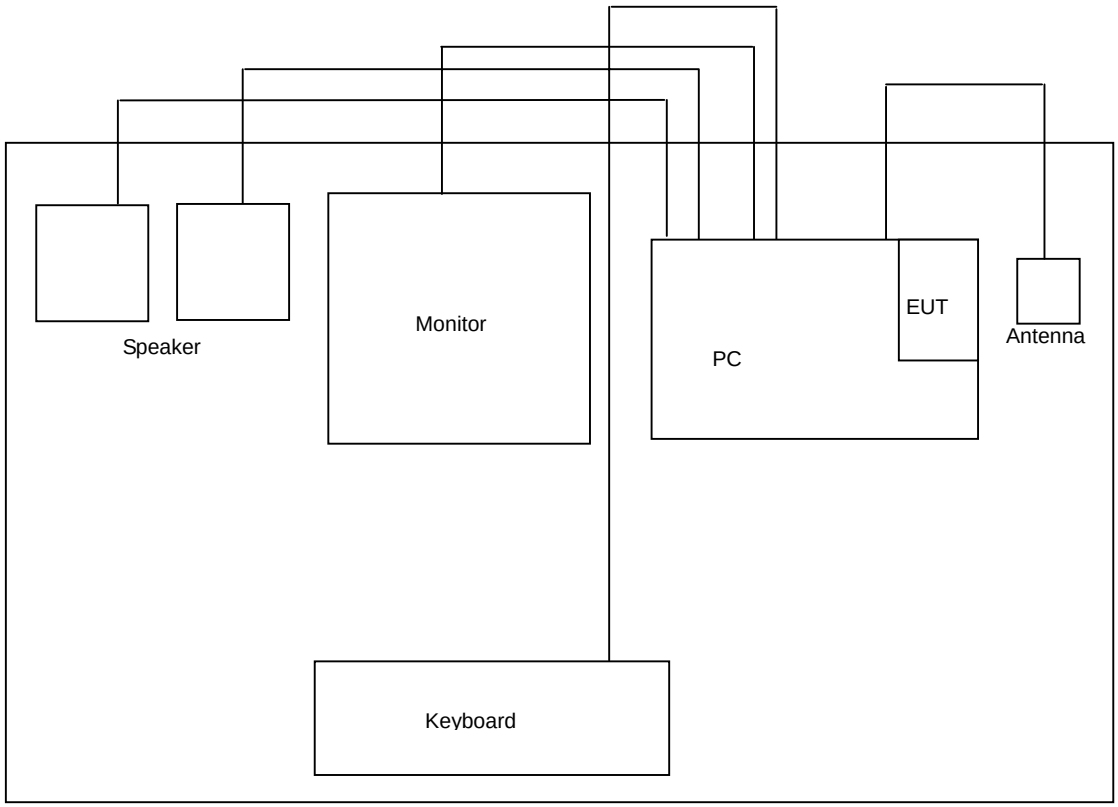
Maximum Conducted Output Power (dBm)		
Frequency Bands 5150MHz ~ 5250MHz	**Frequency Bands 5250MHz ~ 5350MHz**	**Frequency Bands 5725MHz ~ 5825MHz**
16.68	19.99	18.36

Turbo Mode

Maximum Conducted Output Power (dBm)		
Frequency Bands 5150MHz ~ 5250MHz	**Frequency Bands 5250MHz ~ 5350MHz**	**Frequency Bands 5725MHz ~ 5825MHz**
16.75	19.48	16.67

2. Test Configuration of the Equipment under Test

2.1. Connection Diagram of Test System



2.2. The Test Mode Description

1. A soft AP program will be accompanied with the product.
2. For OFDM modulation, BPSK (6 Mbps) is the worst case on all test items.
3. According to ANSI C63.4-2003: Frequency range of EUT is more than 10 MHz, we have to test the lowest, middle and highest channels of EUT.
4. Spurious emission below 1GHz is independent of channel selection and difference of modulation types, there will be no effect on test results. So only channel 112 with OFDM modulation was tested.
5. AC conduction emission is independent of channel selection, difference of modulation types and connected to any types of antennas, there will be no effect on test results. So only channel 112 with OFDM modulation was tested.
6. There are 4 antennas filed in this product, but antenna 2, 3 and 4 are in the same type (external dipole antenna), so only antenna 4 with the largest gain and antenna 1 of patch type (internal antenna) were tested.
7. There are 3 test modes for spurious emission:
   Mode 1 : Internal Antenna (Embedded Patch Antenna)
   Mode 2 : External Antenna (Swivel Antenna)
   Mode 3: HP assigned HP PC (Swivel Antenna)

2.3. Description of Test Supporting Units

Support unit	Brand	Model No.	Serial No.	FCC ID	Data cable (m)
PC	HP	DTPC-16	SP0002	DoC	-
Monitor	VIEWSONIC	VCDTS21553-3P	SP0007	DoC	1.7
(PS2) Keyboard	LOGITECH	Y-SJ17	SP0011	DoC	1.7
(PS2) Mouse	LOGITECH	M-BE58	SP0014	DoC	1.7
Printer	EPSON	STYLUS COLOR 680	SP0019	DoC	1.35
Modem	ACEEX	DM141	SP0019	IFAXDM141	1.15

3. General Information of Test

3.1. Test Facility

Test Site Location : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiag, Tao Yuan Hsien, Taiwan, R.O.C.

: TEL 886-3-327-3456

: FAX 886-3-318-0055

Test Site No : 03CH03-HY / TH01-HY

3.2. Test Conditions

Normal Voltage	: 110.00V(from host)
Extreme Voltages	: 126.50V and 93.5V (from host)
Normal Temperature	: 20˚C
Extreme Temperature	: 0 ˚C and 45 ˚C

3.3. Standards for Methods of Measurement

Here is the list of the standards followed in this test report.

ANSI C63.4-2003

47 CFR Part 15 Subpart C (Section 15.407)

3.4. Frequency Range Investigated

Radiated emission test: from 30 MHz to 10th carrier harmonic.

3.5. Test Distance

The test distance of radiated emission (30MHz~1GHz) test from antenna to EUT is 3 M.
The test distance of radiated emission (1GHz~10th carrier harmonic) test from antenna to EUT is 3 M.

3.6. Test Software

During testing, Channel & Power Controlling Software: This was provided by the manufacturer and is able to let the test engineer select the operating channel as well as the RF output power. The parameters for channel selection is trying to offer the test engineer the ability to fix the operating channel for testing, both normal data and continuously transmitting modes are allowed, and that for 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.

Normal Mode

Test Software: ART					
Frequency Bands					
5150MHz ~ 5250MHz		5250MHz ~ 5350MHz		5725MHz ~ 5825MHz	
Frequency	Power Setup	Frequency	Power Setup	Frequency	Power Setup
5180 MHz	14	5260 MHz	17	5745 MHz	14.5
5200 MHz	14	5280 MHz	17.5	5765 MHz	17.5
5240 MHz	14	5320 MHz	16.5	5805 MHz	13

Turbo Mode

Frequency Bands					
5150MHz ~ 5250MHz		5250MHz ~ 5350MHz		5725MHz ~ 5825MHz	
Frequency	Power Setup	Frequency	Power Setup	Frequency	Power Setup
5210 MHz	14.5	5290 MHz	17.5	5760 MHz	16
5250 MHz	14			5800 MHz	13

4. List of Measurements

4.1. Summary of the Test Results

Applied Standard: 47 CFR Part 15 and Part 2			
Paragraph	**FCC Rule**	**Description of Test**	**Result**
5.1	15.407	26dB Spectrum Bandwidth	Pass
5.2	15.407	Maximum Conducted Output Power	Pass
5.3	15.407	Peak Power Spectral Density	Pass
5.4	15.407	Ratio of the Peak Excursion	Pass
5.5	15.407	Band Edges Emission	Pass
5.6	15.407	Test of Frequency Stability	Pass
5.7	15.407	AC Power Line Conducted Emission	Pass
5.8	15.209/15.407	Spurious Radiated Emission	Pass
5.9	15.203/15.407	Antenna Requirement	Pass
5.10	2.1091	Maximum Permissible Exposure	Pass

5. Test Result

5.1. Test of 26dB Spectrum Bandwidth

5.1.1. Measuring Instruments

Item 18 of the table is on section 6.

5.1.2. Test Procedures

1. The transmitter output was connected to the spectrum analyzer through an attenuator.
2. Set RBW of spectrum analyzer to 300KHz and VBW to 1000KHz.
3. The spectrum width with level higher than 26dB below the peak level.

5.1.3. Test Setup Layout

Spectrum Analyzer **EUT**

5.1.4. Test Result: See spectrum analyzer plots below

- Temperature: 24°C
- Relative Humidity: 51%
- Duty Cycle of the Equipment During the Test: 100.00%
- Test Engineer: Sam Lee

Normal Mode

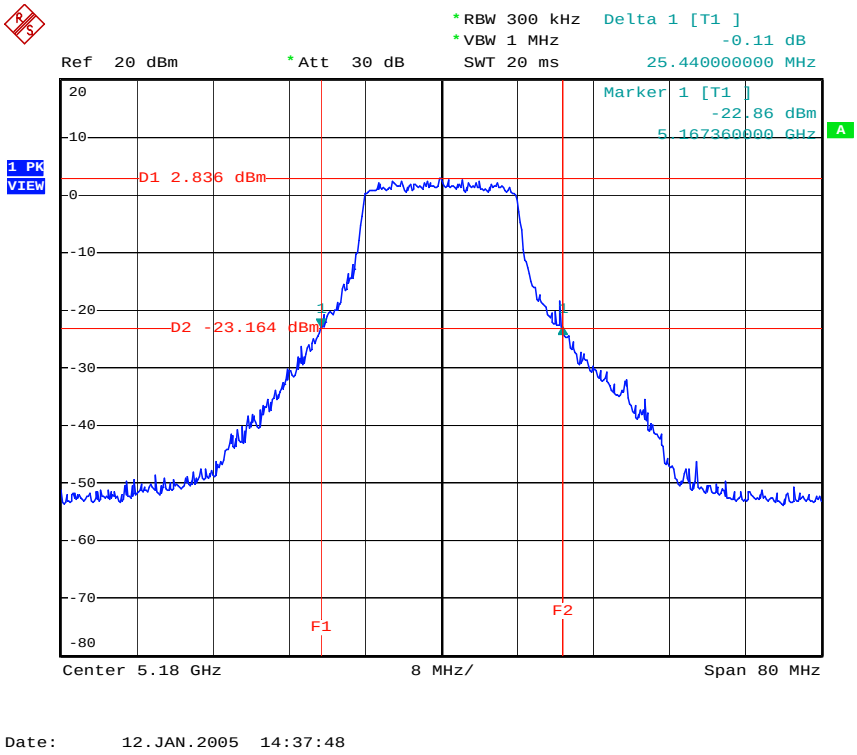
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Calculated Power Limit (dBm)	Applied Power Limit (dBm)
36	5180 MHz	25.44	18.06	17
40	5200 MHz	25.60	18.08	17
48	5240 MHz	26.24	18.19	17
52	5260 MHz	32.96	26.18	24
56	5280 MHz	32.96	26.18	24
64	5320 MHz	26.40	25.22	24
100	5745 MHz	24.96	30.97	30
104	5765 MHz	26.08	31.16	30
112	5805 MHz	24.80	30.94	30

Turbo Mode

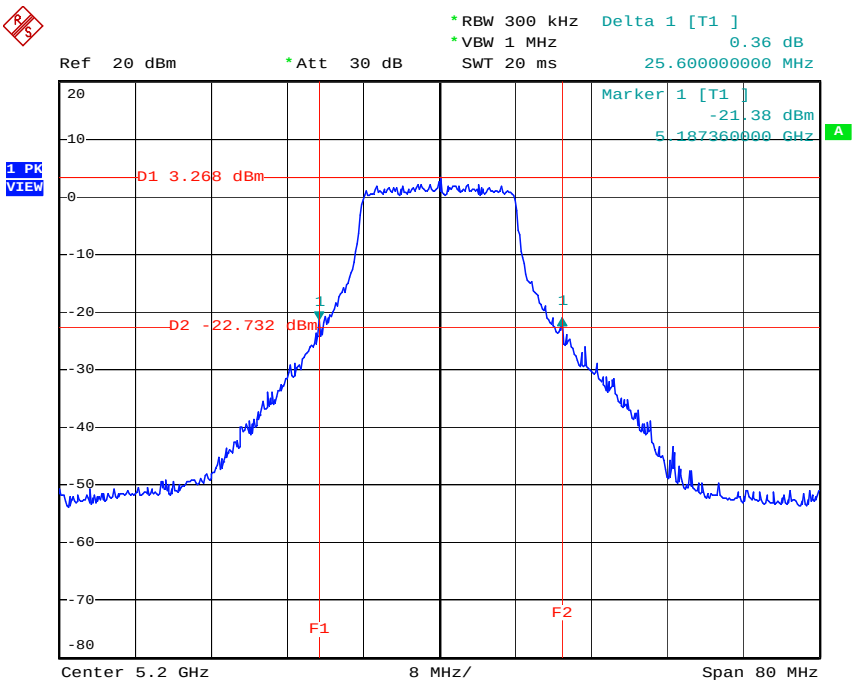
Channel	Frequency (MHz)	26dB Bandwidth (MHz)	Calculated Power Limit (dBm)	Applied Power Limit (dBm)
42	5210 MHz	45.60	20.59	17
50	5250 MHz	49.00	20.90	17
58	5290 MHz	44.80	27.51	24
103	5760 MHz	45.60	33.59	30
108	5800 MHz	44.60	33.49	30

Normal Mode

Channel: 36 / 5180 MHz



Channel: 40 / 5200 MHz



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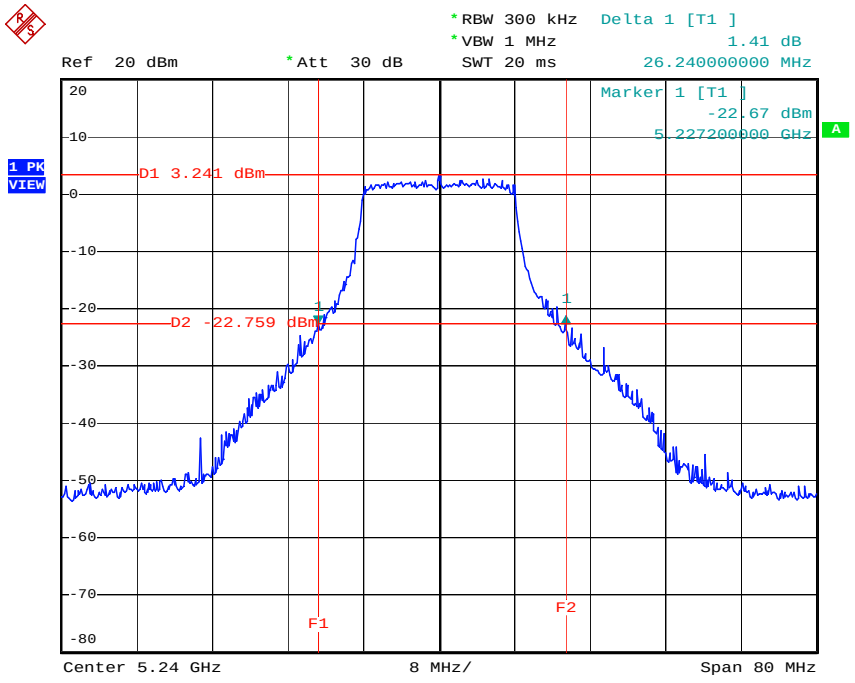
Channel: 48 / 5240 MHz



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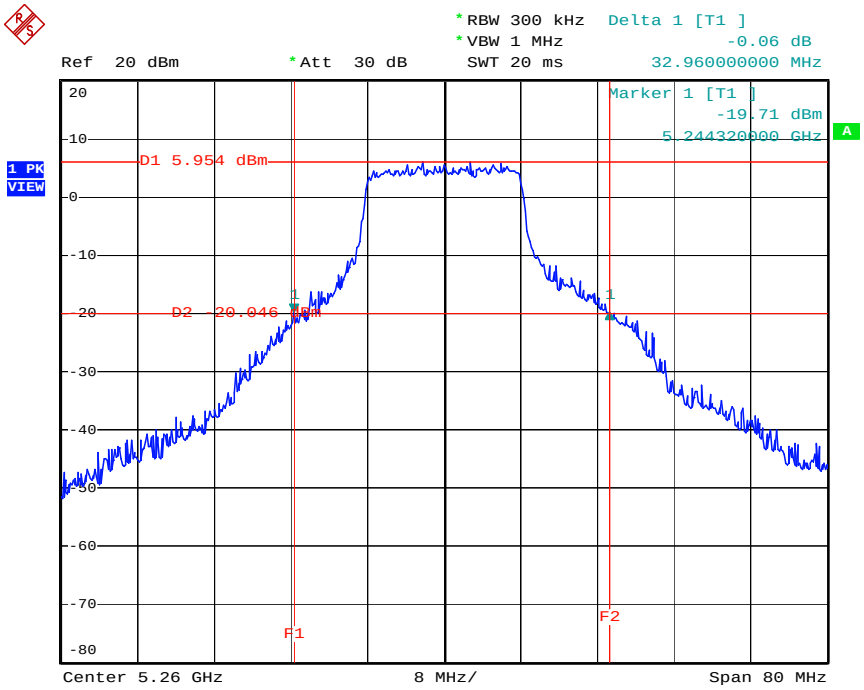
Channel: 52 / 5260 MHz



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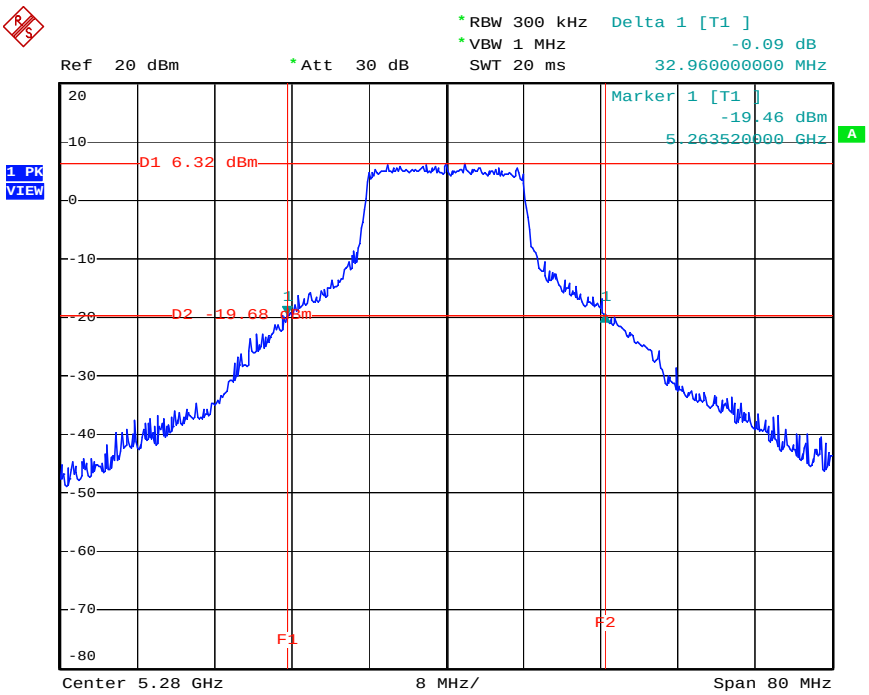
Channel: 56 / 5280 MHz



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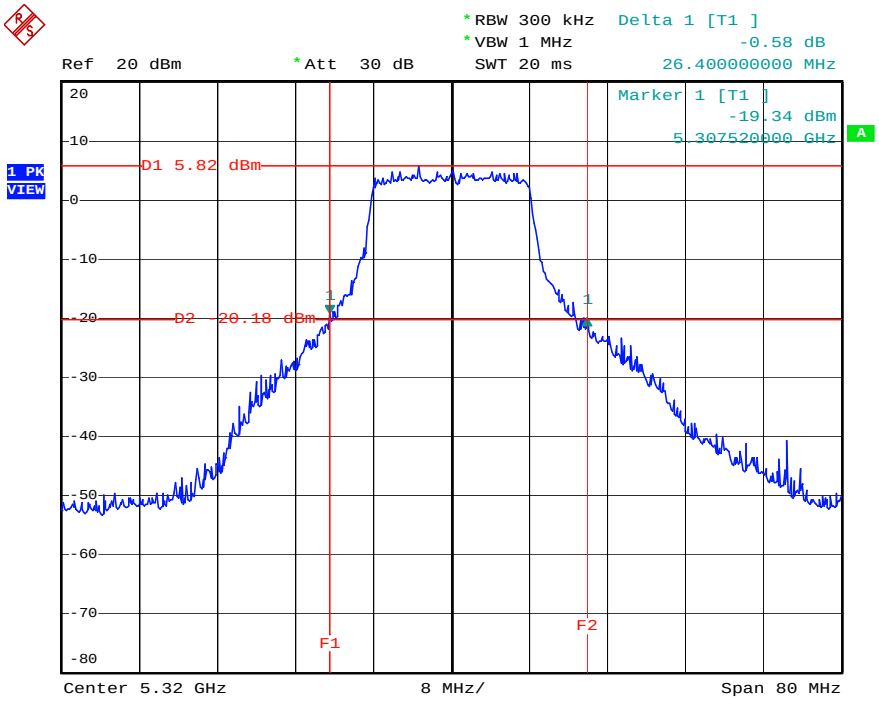
Channel: 64 / 5320 MHz



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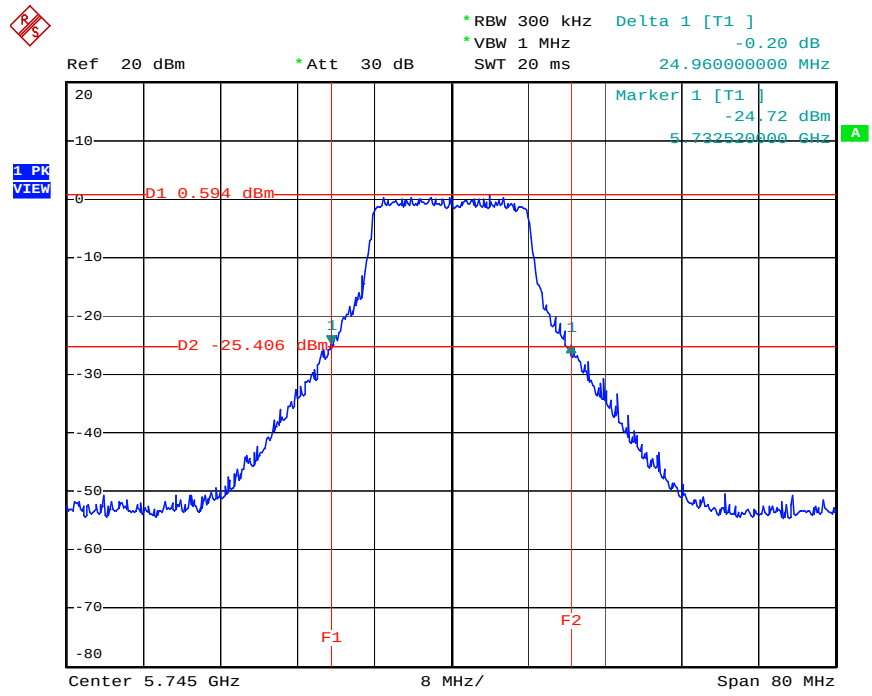
Channel: 100 / 5745 MHz



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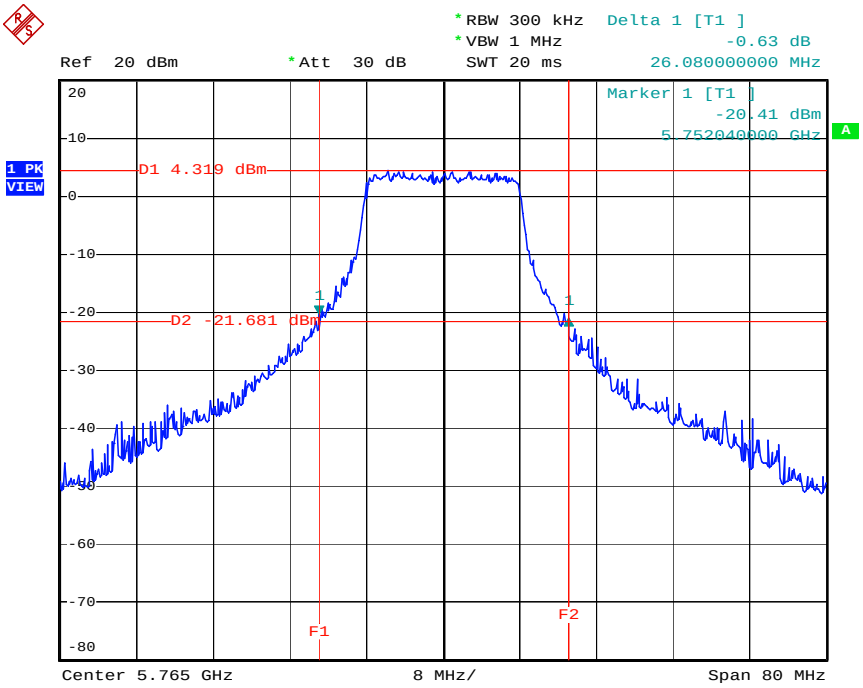
Channel: 104 / 5765 MHz



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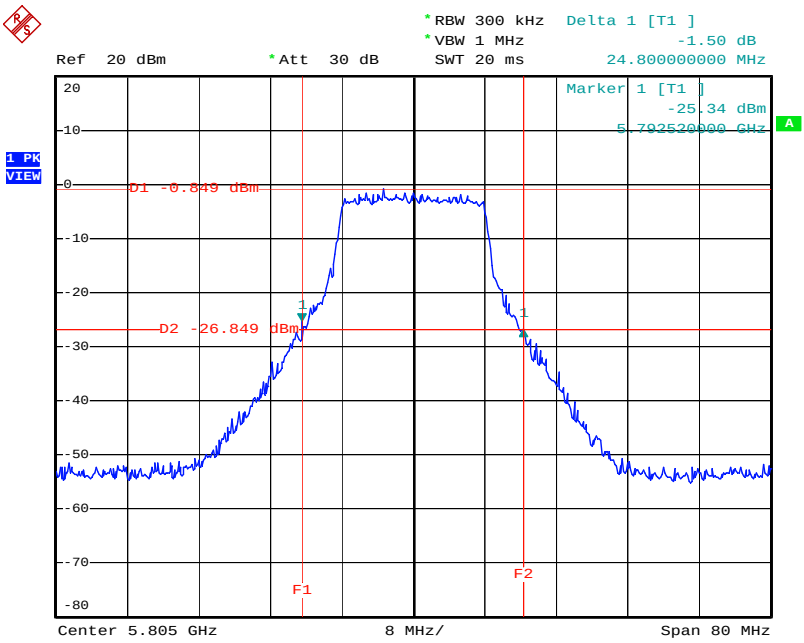
Channel: 112 / 5805 MHz



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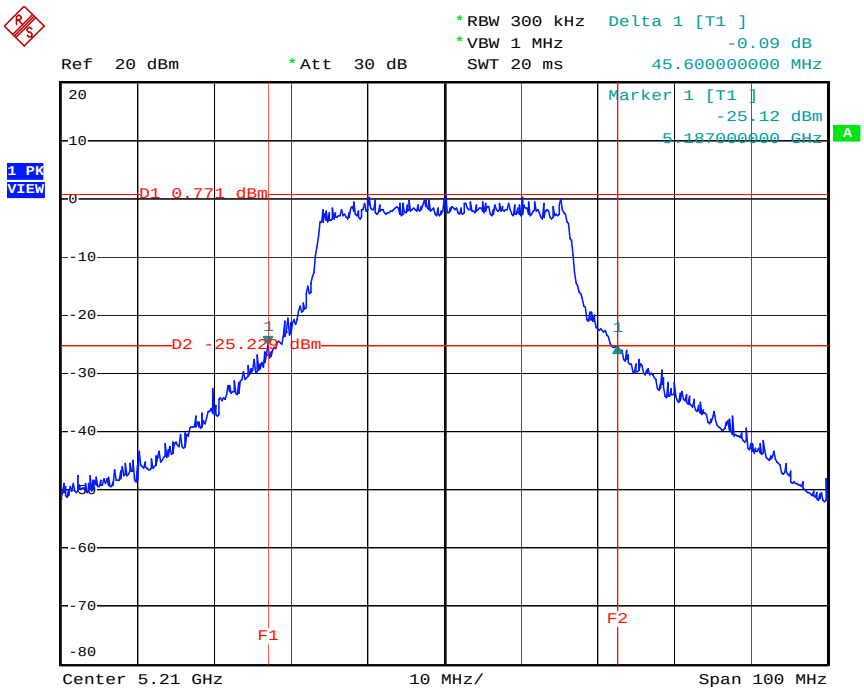
Turbo Mode

Channel: 42 / 5210 MHz



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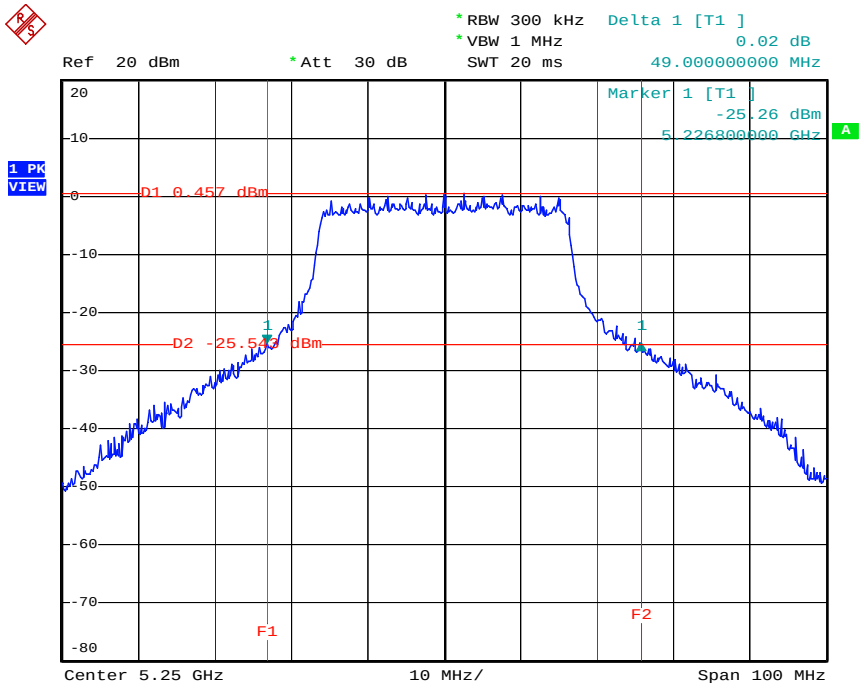
Channel: 50 / 5250 MHz



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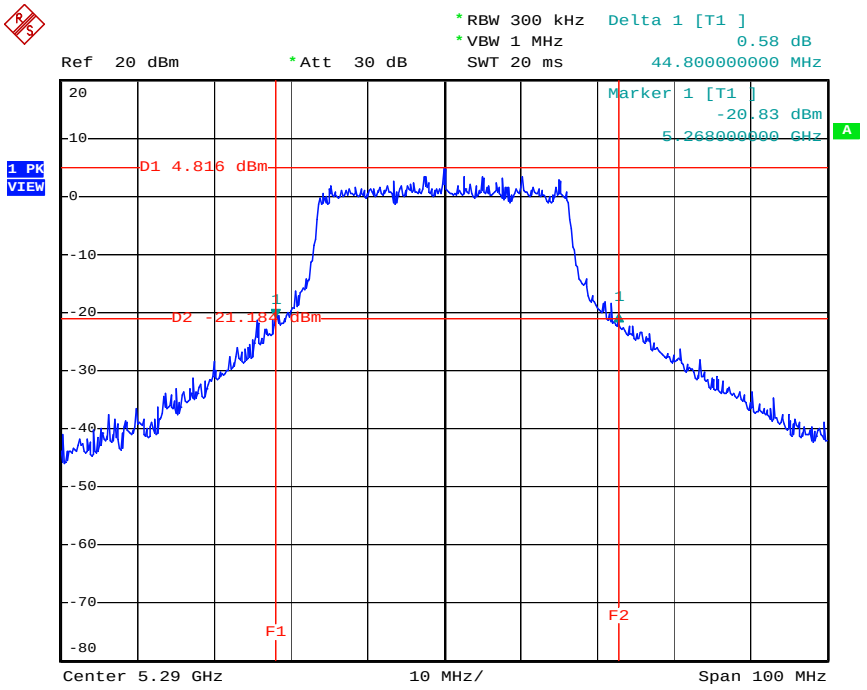
Channel: 58 / 5290 MHz



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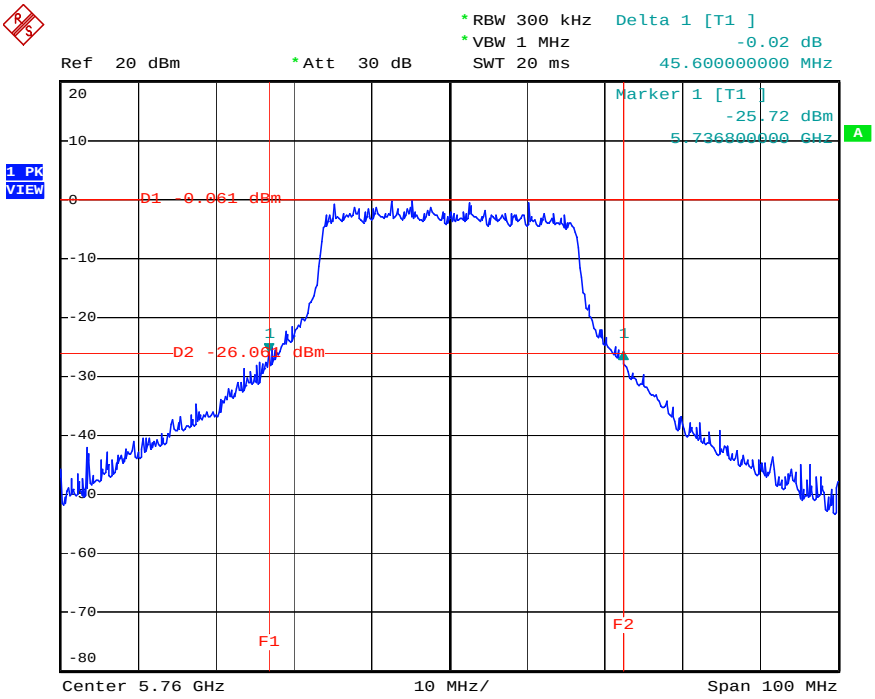
Channel: 103 / 5760 MHz



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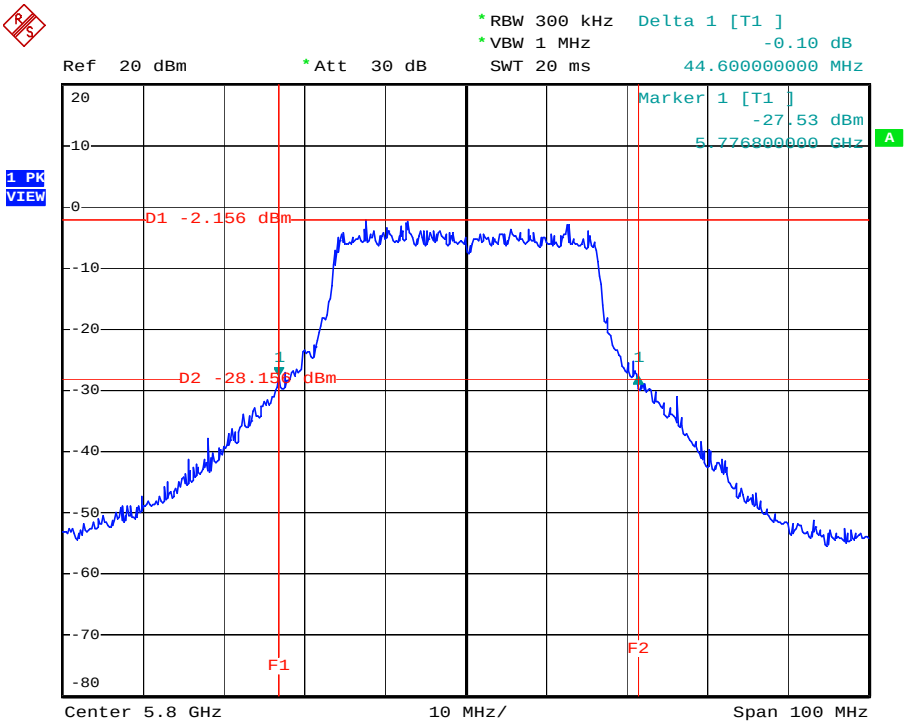
Channel: 108 / 5800 MHz



5.2. Test of Maximum Conducted Output Power

5.2.1. Measuring Instruments

Item 18 of the table is on section 6.

5.2.2. Test Procedures

1. According to FCC DA 02-2138 test procedure, EUT connected to spectrum analyzer, then used the channel power function of spectrum analyzer and calculated total average power range is more than 26dB bandwidth.
2. Repeated the 1 for the middle and highest channel of the EUT.

5.2.3. Test Setup Layout

Spectrum Analyzer **EUT**

5.2.4. Test Result of Conducted Power

- Temperature: 24°C
- Relative Humidity: 51%
- Duty Cycle of the Equipment During the Test: 100.00%
- Test Engineer: Sam Lee

Normal Mode

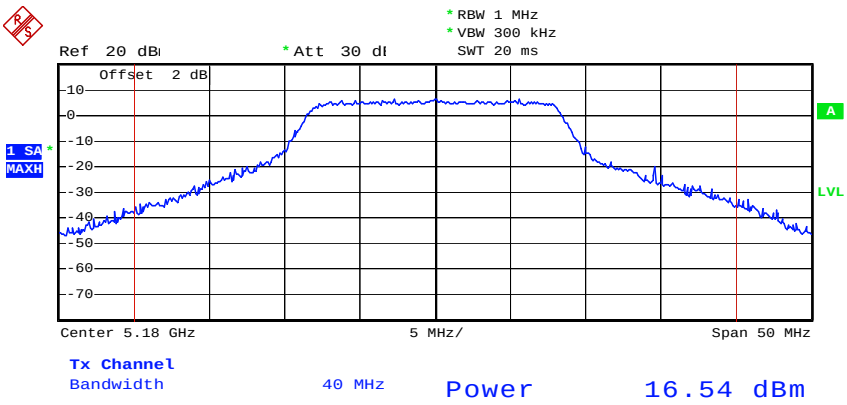
Channel	Frequency (MHz)	Output Power (dBm)	Limits (dBm)
36	5180 MHz	16.54	17
40	5200 MHz	16.29	17
48	5240 MHz	16.68	17
52	5260 MHz	19.48	24
56	5280 MHz	19.99	24
64	5320 MHz	18.66	24
100	5745 MHz	15.37	30
104	5765 MHz	18.36	30
112	5805 MHz	13.55	30

Turbo Mode

Channel	Frequency (MHz)	Output Power (dBm)	Limits (dBm)
42	5210 MHz	16.75	17
50	5250 MHz	16.29	17
58	5290 MHz	19.48	24
103	5760 MHz	16.67	30
108	5800 MHz	13.48	30

Normal Mode

Channel: 36 / 5180 MHz



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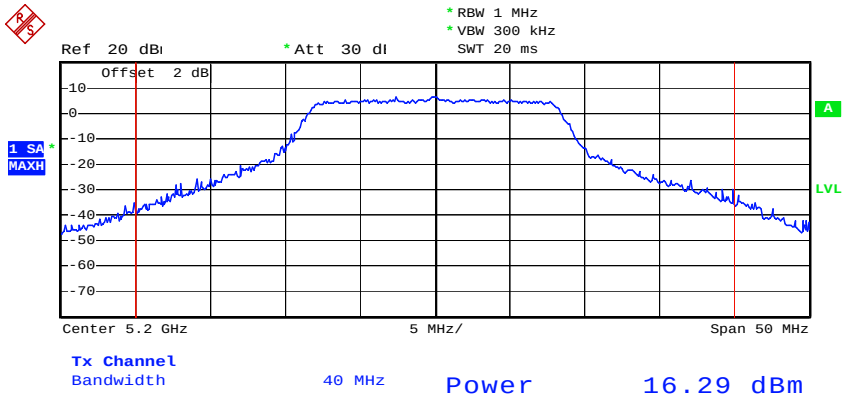
Channel: 40 / 5200 MHz



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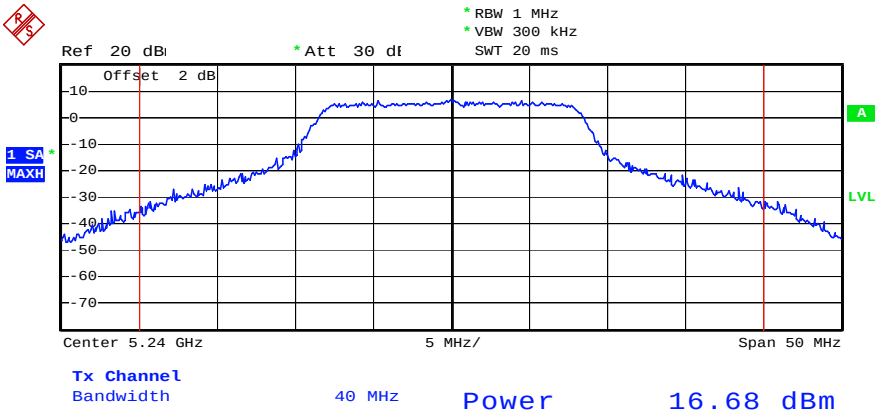
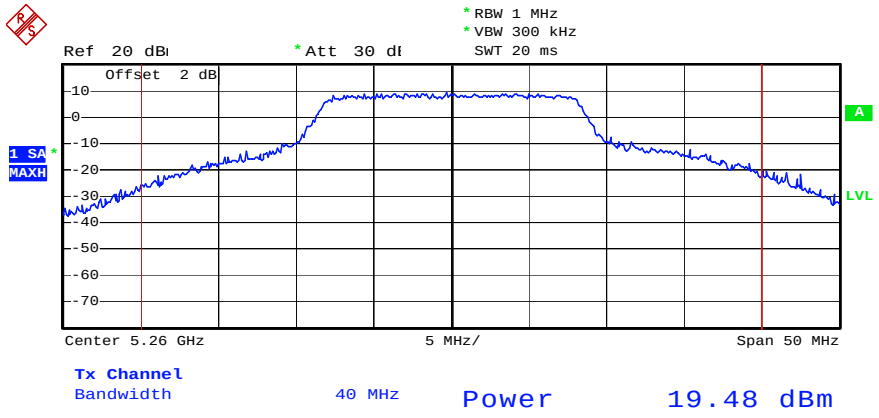
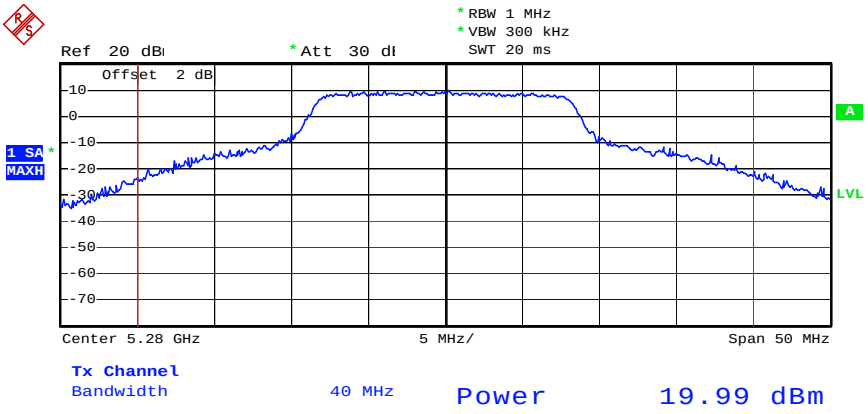
Channel: 48 / 5240 MHz



Channel: 52 / 5260 MHz



Channel: 56 / 5280 MHz



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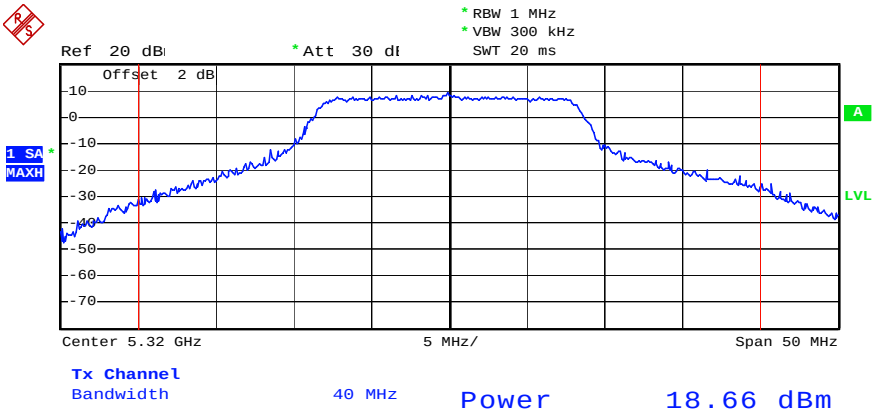
Channel: 64 / 5320 MHz



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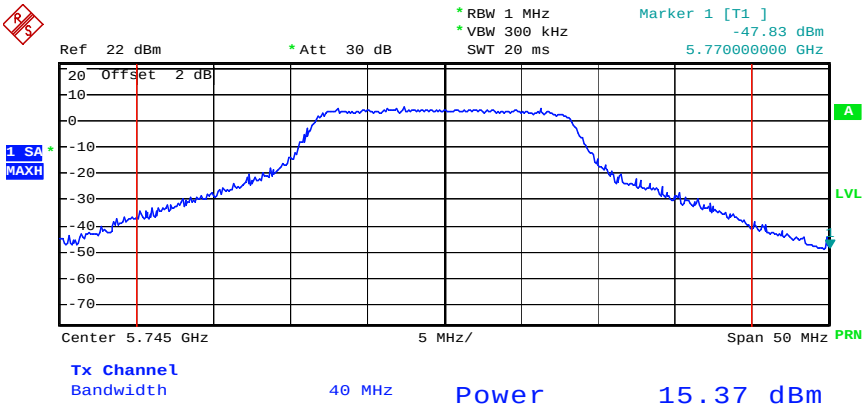
Channel: 100 / 5745 MHz



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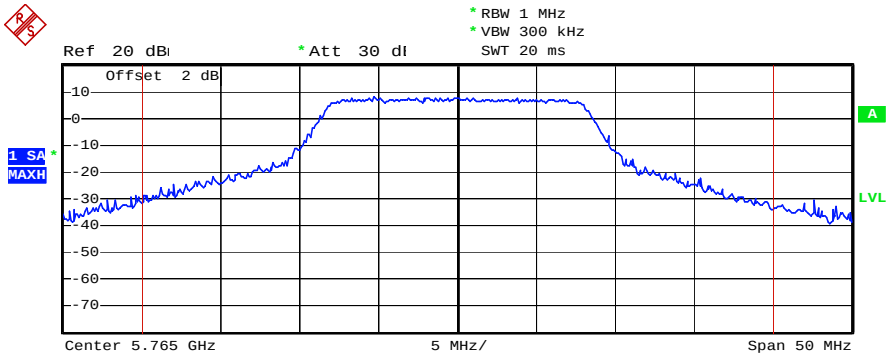
Channel: 104 / 5765 MHz



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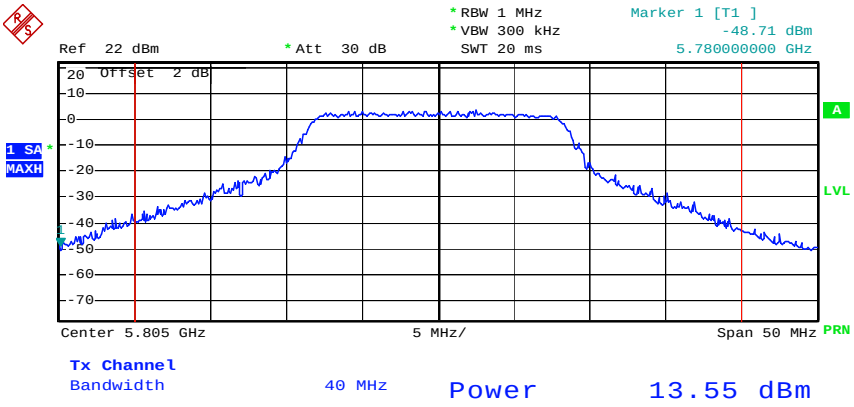
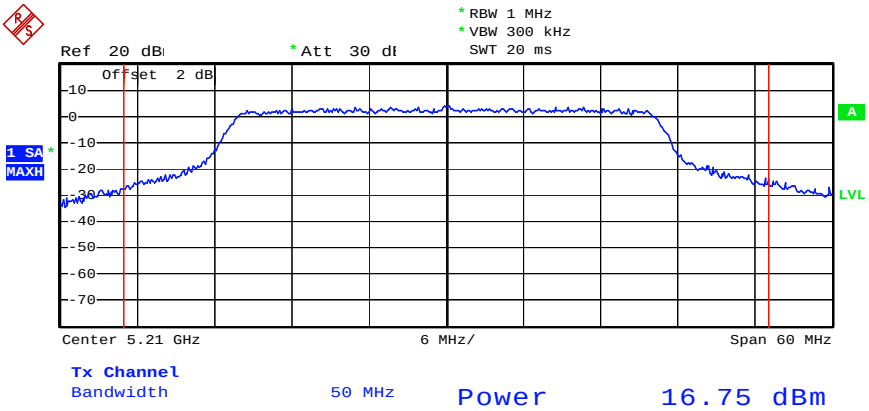
Channel: 112 / 5805 MHz



Date: 3.MAR.2005 15:47:10

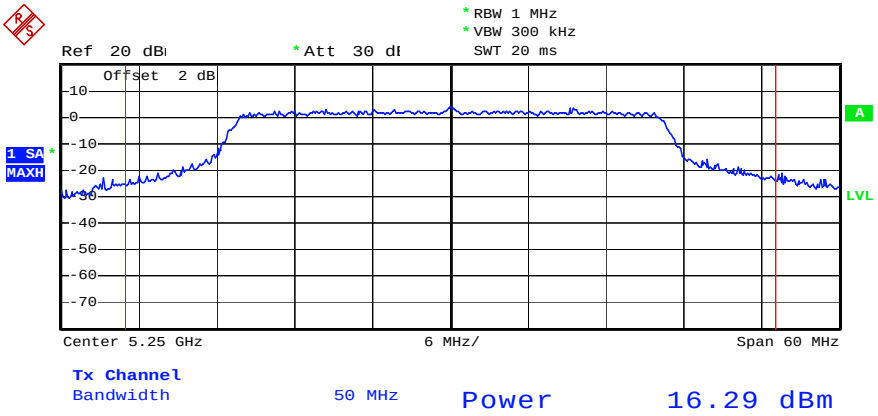
Turbo Mode

Channel: 42 / 5210 MHz



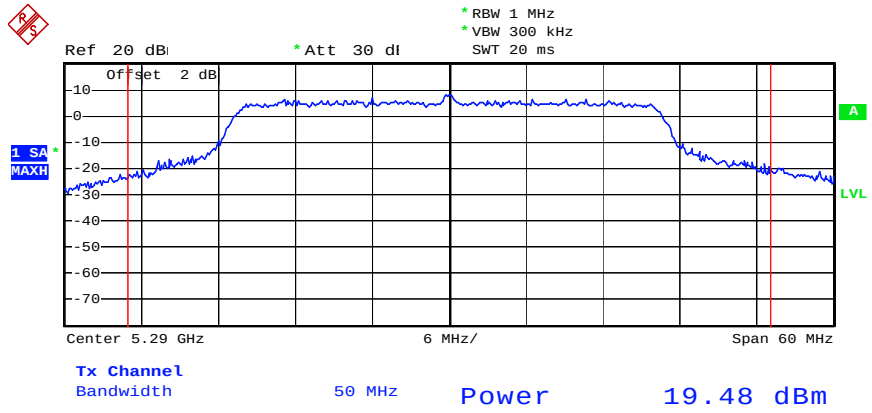
Date: 12.JAN.2005 14:56:15

Channel: 50 / 5250 MHz



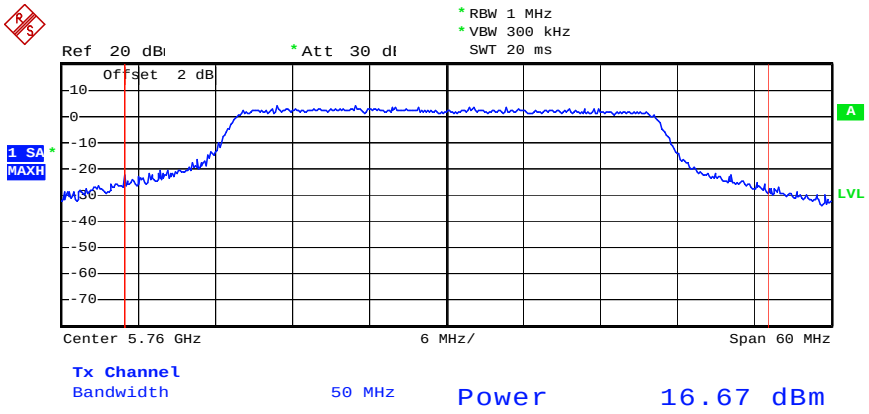
Date: 17.JAN.2005 10:13:20

Channel: 58 / 5290 MHz



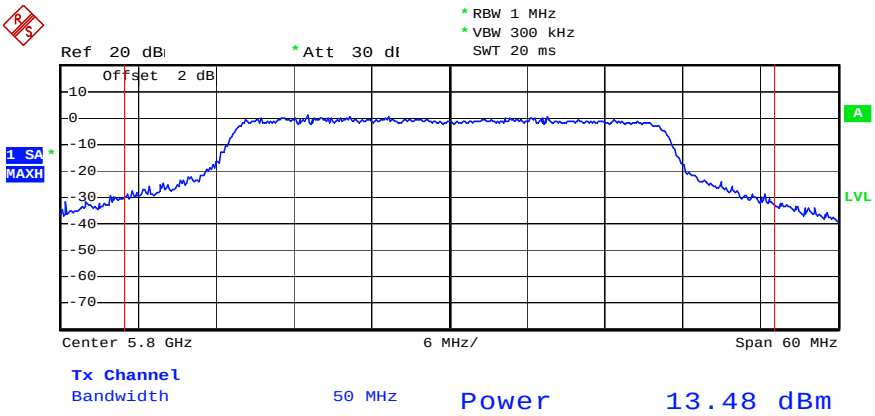
Date: 12.JAN.2005 14:59:02

Channel: 103 / 5760 MHz



Date: 26.JAN.2005 18:03:27

Channel: 108 / 5800 MHz



Date: 26.JAN.2005 18:04:56

5.3. Test of Peak Power Spectral Density

5.3.1. Measuring Instruments

Item 18 of the table is on section 6.

5.3.2. Test Procedures

1. According to FCC DA 02-2138 test procedure, EUT connected to spectrum analyzer, then used the same setup as power measurement of spectrum analyzer.
2. Repeated the 1 for the middle and highest channel of the EUT.

5.3.3. Test Setup Layout

Spectrum Analyzer **EUT**

5.3.4. Test Result of conducted peak power spectral density:

- Temperature: 24°C
- Relative Humidity: 51%
- Duty Cycle of the Equipment During the Test: 100.00%
- Test Engineer: Sam Lee

Normal Mode

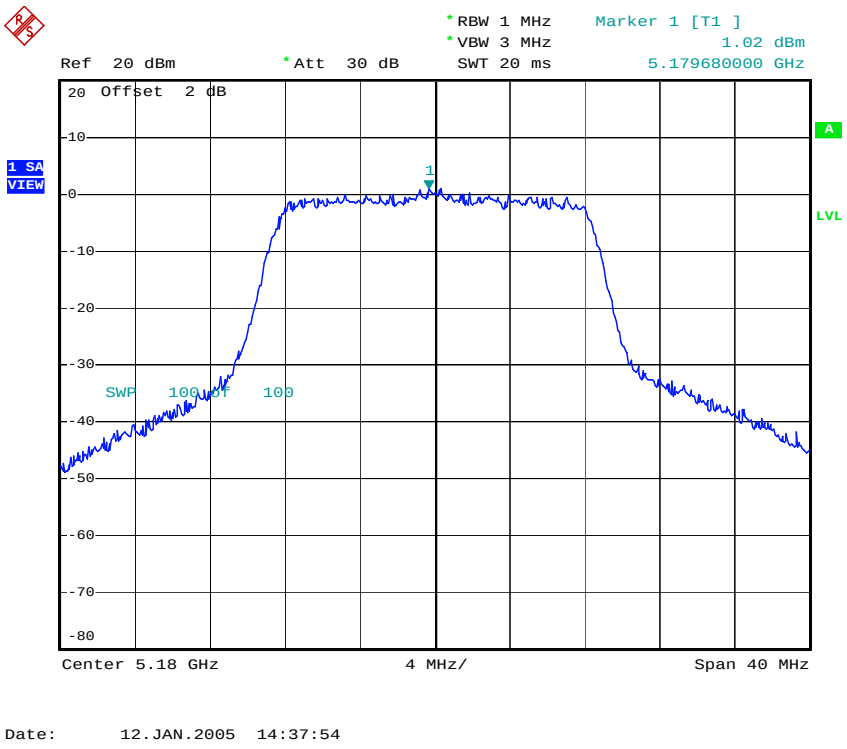
Channel	Frequency (MHz)	Power Density (dBm)	Limits (dBm)
36	5180 MHz	1.02	4
40	5200 MHz	0.77	4
48	5240 MHz	1.18	4
52	5260 MHz	3.12	4
56	5280 MHz	3.90	11
64	5320 MHz	2.89	11
100	5745 MHz	-1.34	17
104	5765 MHz	3.79	17
112	5805 MHz	-3.39	17

Turbo Mode

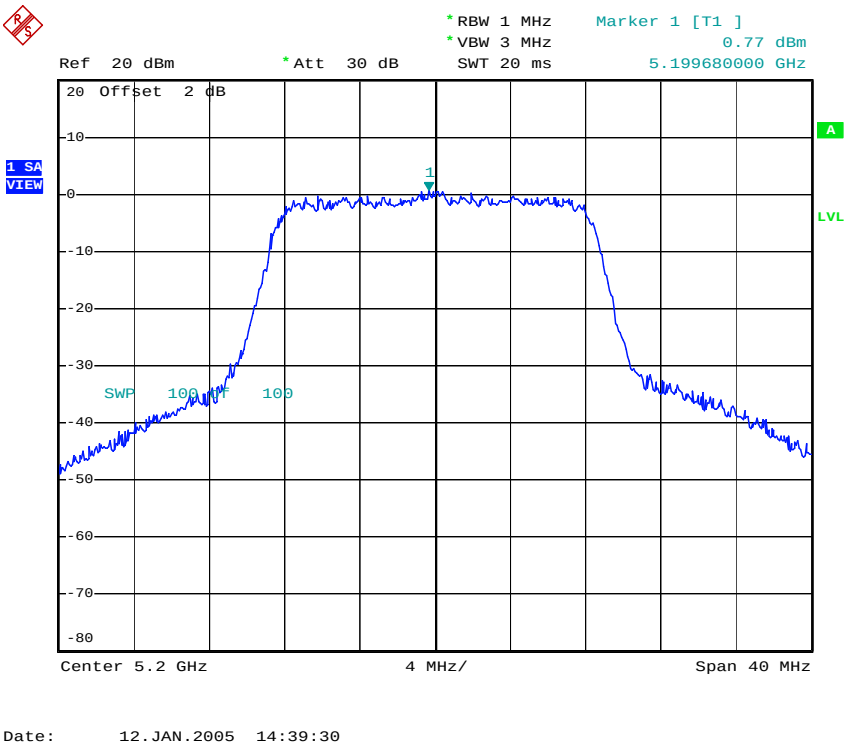
Channel	Frequency (MHz)	Power Density (dBm)	Limits (dBm)
42	5210 MHz	-0.78	4
50	5250 MHz	-0.56	4
58	5290 MHz	4.88	11
103	5760 MHz	-2.15	17
108	5800 MHz	-5.31	17

Normal Mode

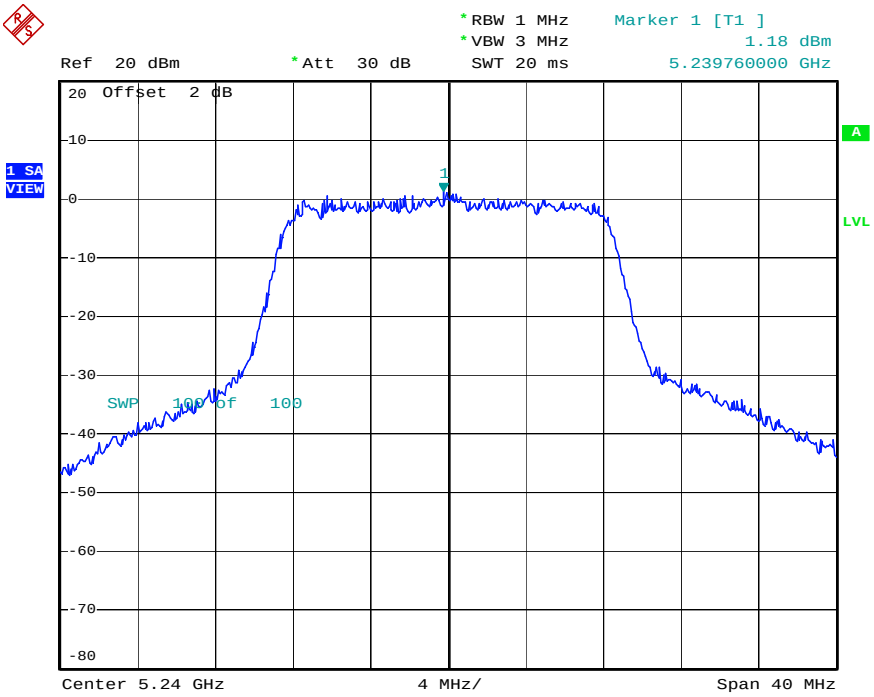
Channel: 36 / 5180 MHz



Channel: 40 / 5200 MHz

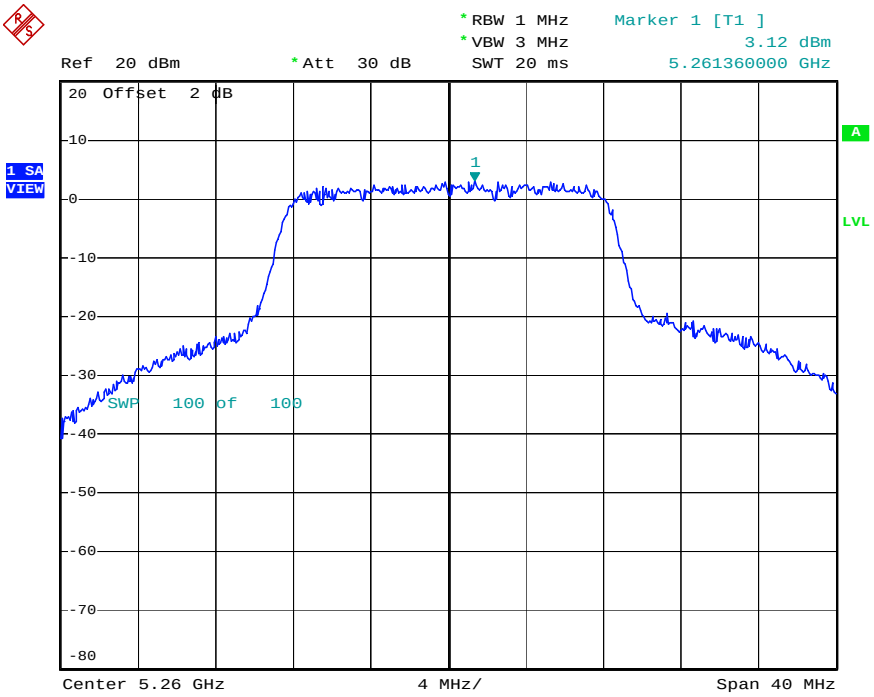


Channel: 48 / 5240 MHz



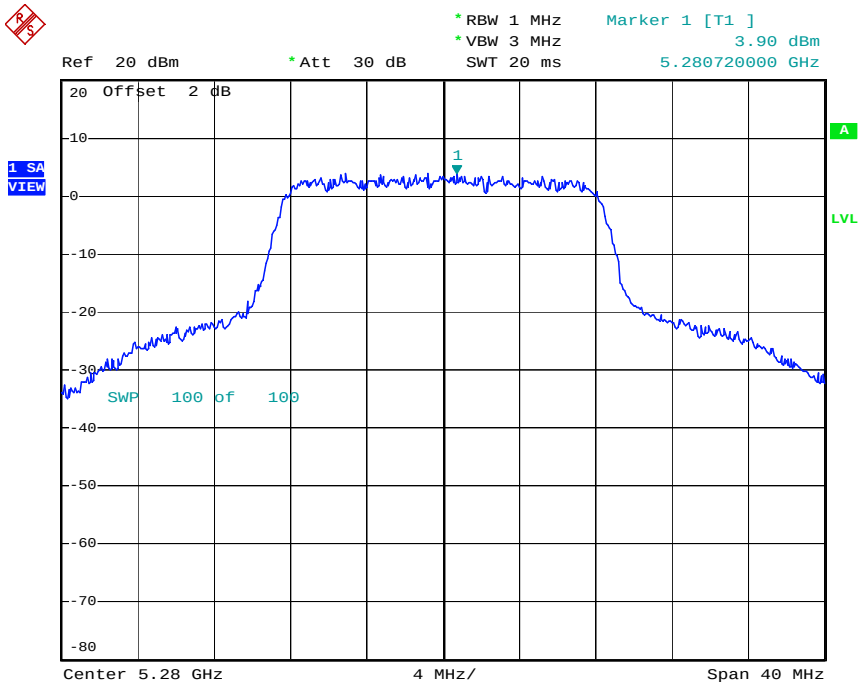
Date: 12.JAN.2005 14:41:52

Channel: 52 / 5260 MHz



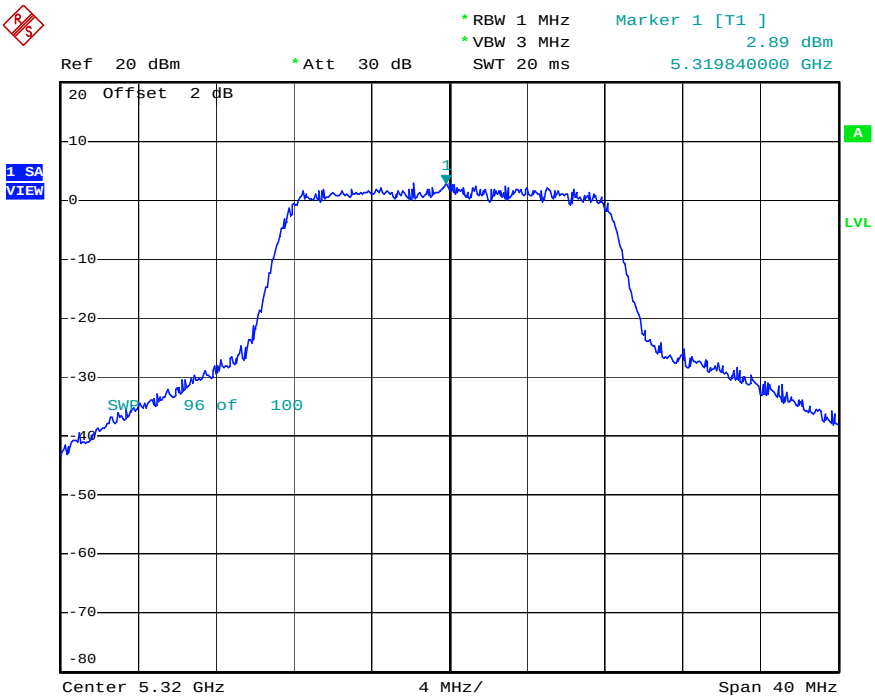
Date: 2.FEB.2005 21:41:45

Channel: 56 / 5280 MHz



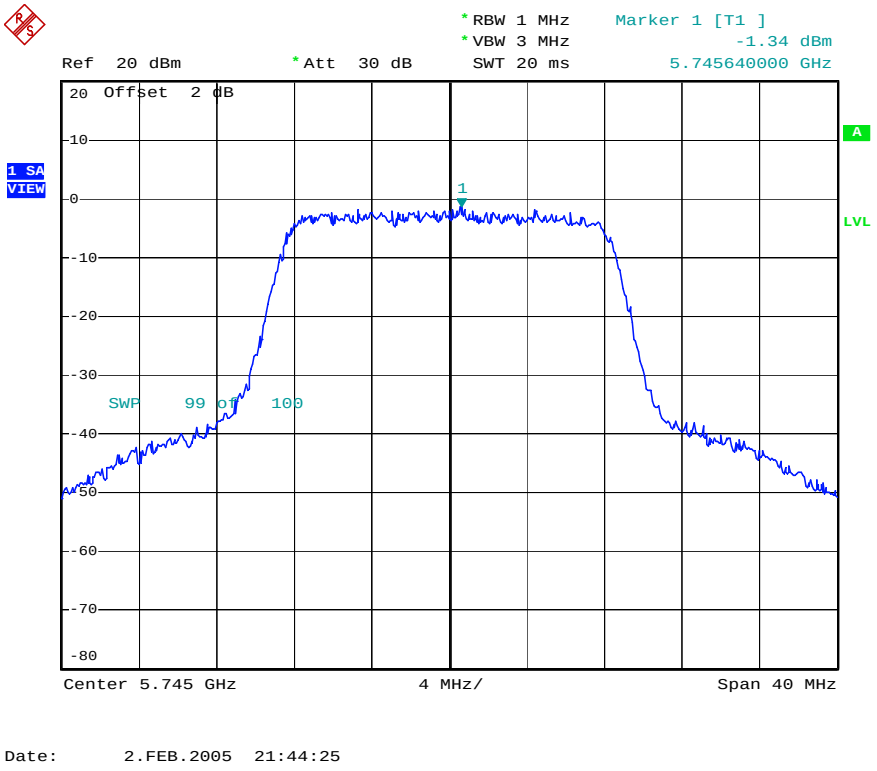
Date: 2.FEB.2005 21:42:43

Channel: 64 / 5320 MHz

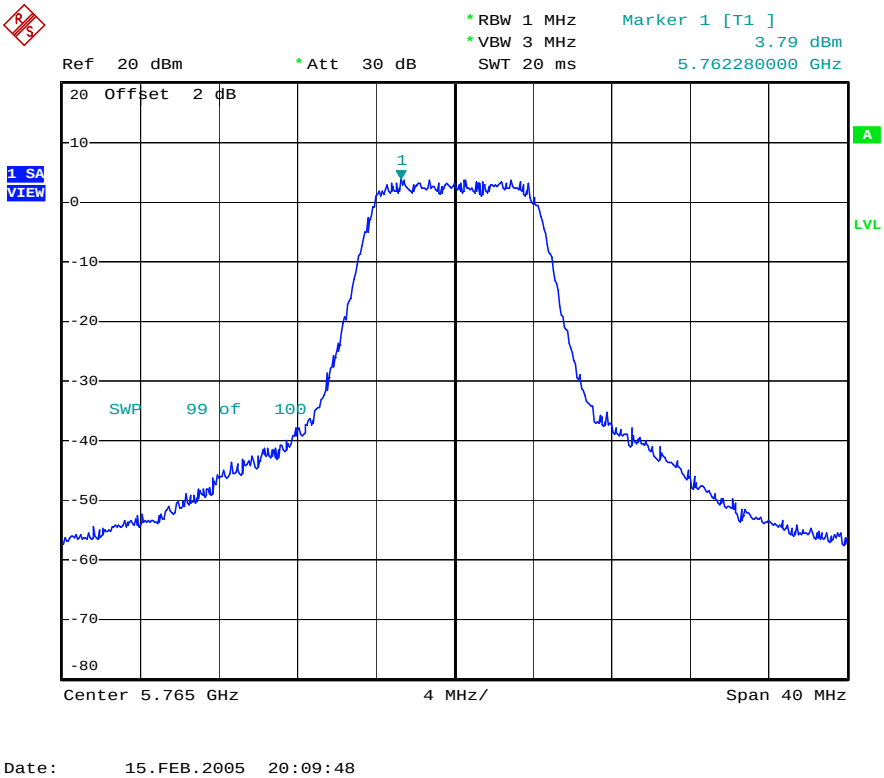


Date: 12.JAN.2005 14:46:52

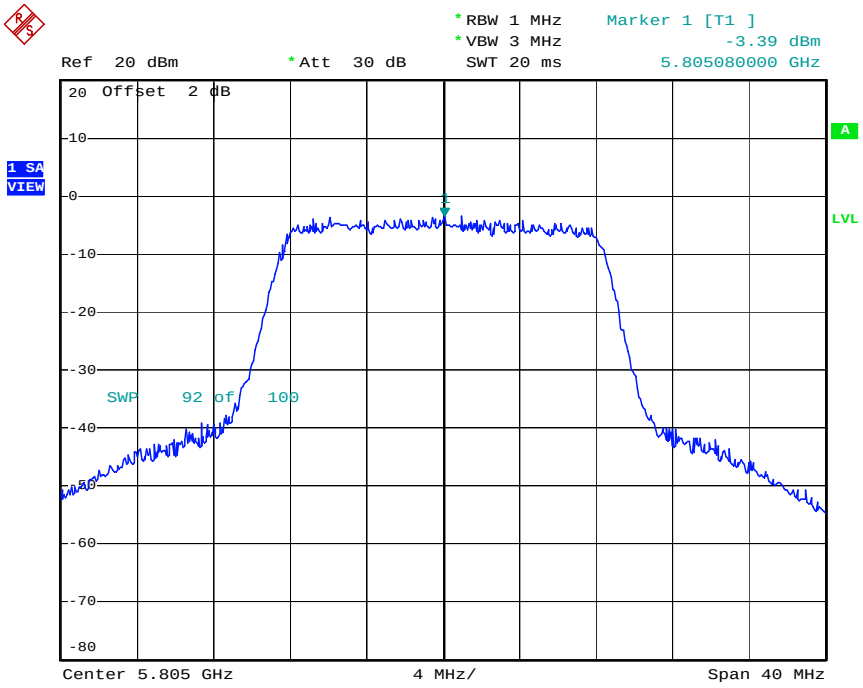
Channel: 100 / 5745 MHz



Channel: 104 / 5765 MHz

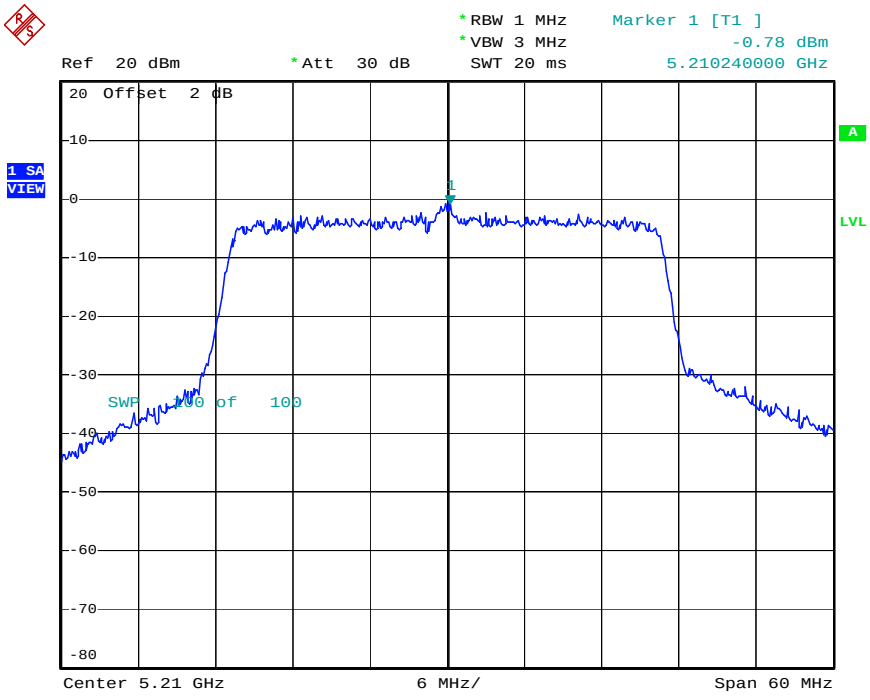


Channel: 112 / 5805 MHz

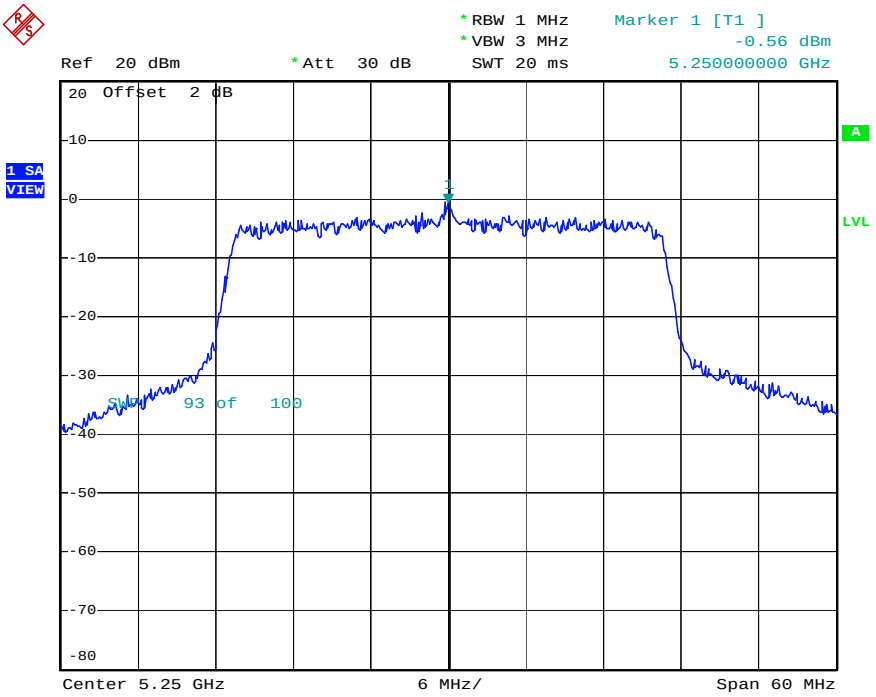


Turbo Mode

Channel: 42 / 5210 MHz

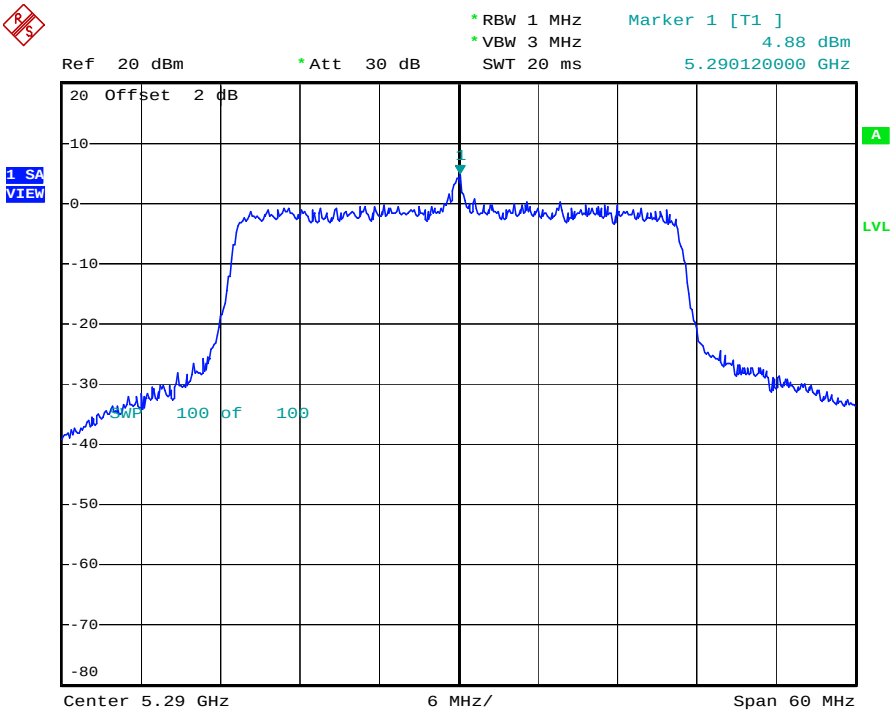


Channel: 50 / 5250 MHz



Date: 17.JAN.2005 10:13:01

Channel: 58 / 5290 MHz



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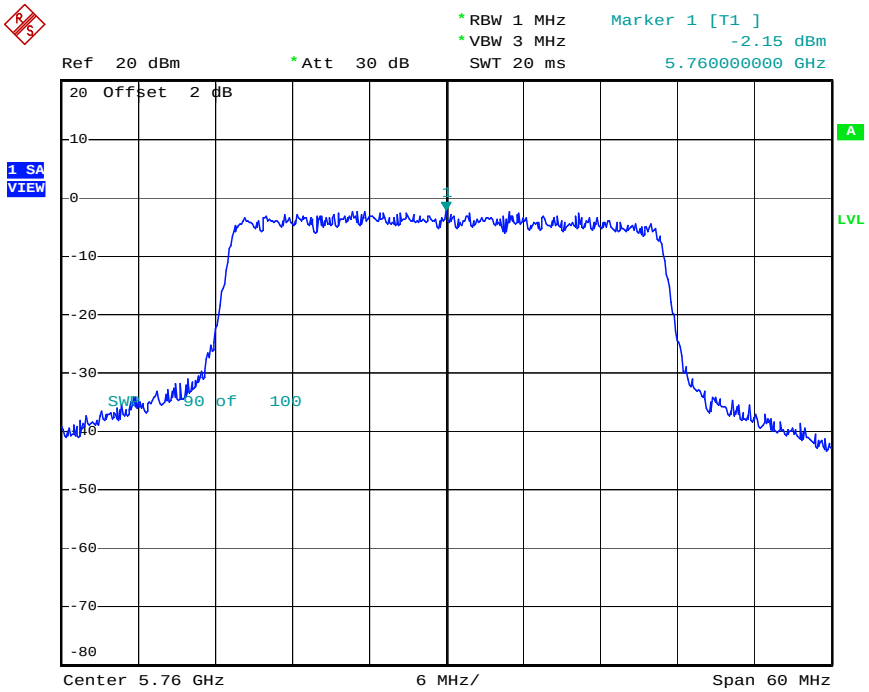
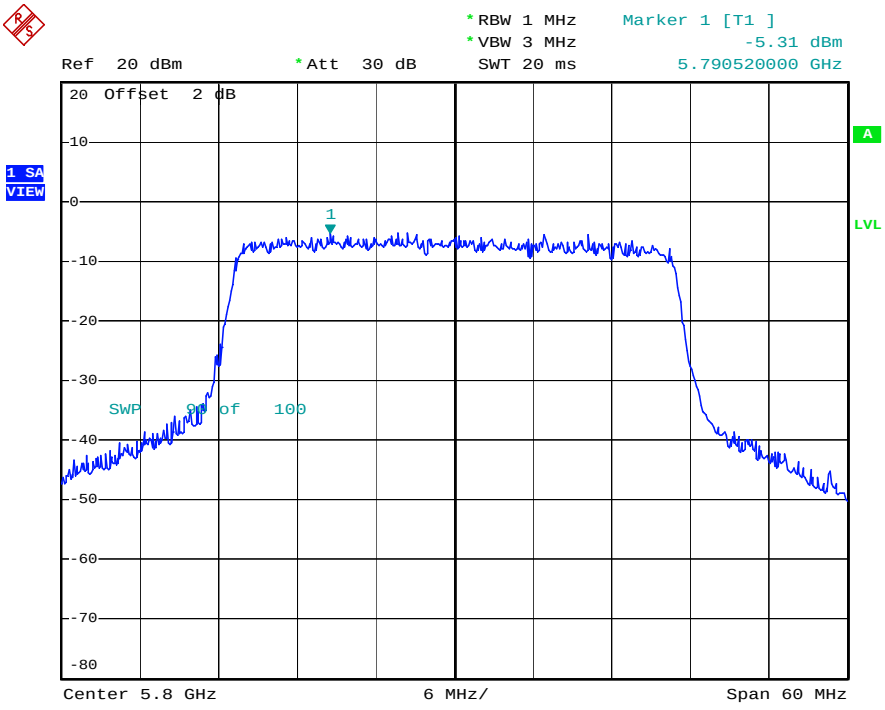
Channel: 103 / 5760 MHz



Channel: 108 / 5800 MHz



5.4. Ratio of the Peak Excursion

5.4.1. Measuring Instruments

Item 18 of the table is on section 6.

5.4.2. Test Procedures

1. The transmitter output is connected to the spectrum analyzer through an attenuator.
2. Trace 1:Set RBW of spectrum analyzer to 1000kHz and VBW to 3000kHz.
3. Use peak detector mode, Max-hold and search the peak of trace 1.
4. Trace 1:Set RBW of spectrum analyzer to 1000kHz and VBW to 3000kHz.
5. Use sample detector mode, trace max-hold and search the peak of trace 2
6. The delta limits is 13dB between trace 1 and trace 2 of the peak value.

5.4.3. Test Setup Layout

Spectrum Analyzer **EUT**

5.4.4. Test Result of conducted peak power spectral density

- Temperature: 24°C
- Relative Humidity: 51%
- Duty Cycle of the Equipment During the Test: 100.00%
- Test Engineer: Sam Lee

Normal Mode

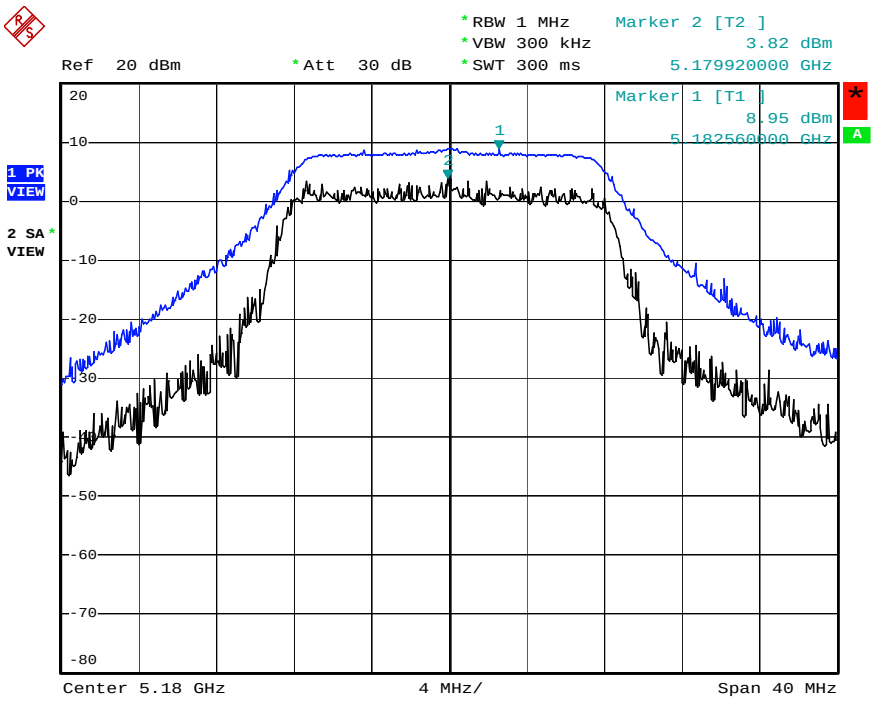
Channel	Frequency (MHz)	Peak Excursion (dB)	Max. Limits (dB)
36	5180 MHz	5.13	13
40	5200 MHz	5.09	13
48	5240 MHz	5.42	13
52	5260 MHz	5.30	13
56	5280 MHz	5.28	13
64	5320 MHz	5.34	13
100	5745 MHz	5.12	13
104	5765 MHz	5.04	13
112	5805 MHz	5.33	13

Turbo Mode

Channel	Frequency (MHz)	Peak Excursion (dB)	Max. Limits (dB)
42	5210 MHz	4.59	13
50	5250 MHz	4.15	13
58	5290 MHz	4.03	13
103	5760 MHz	3.68	13
108	5800 MHz	4.33	13

Normal Mode

Channel: 36 / 5180 MHz



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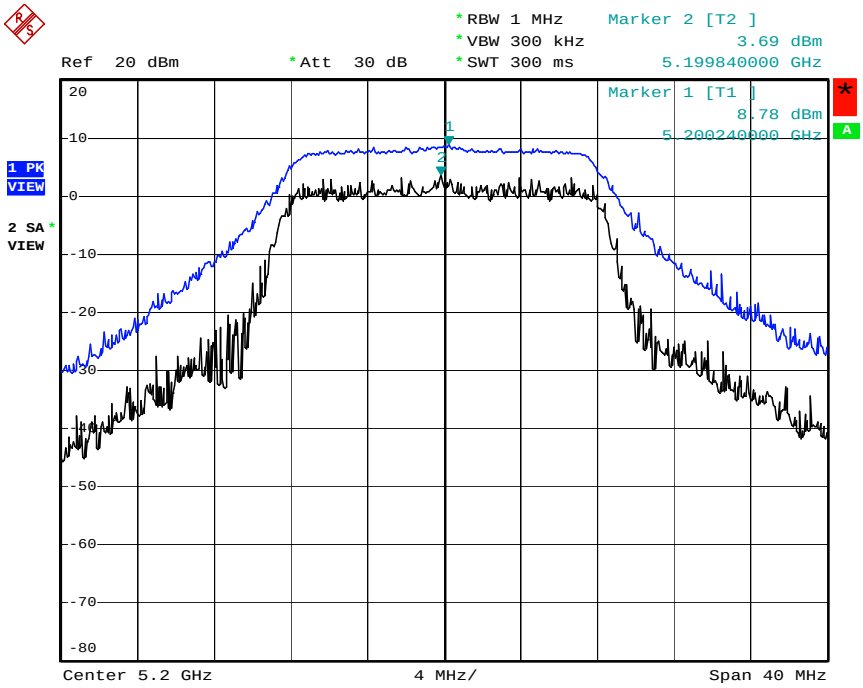
Channel: 40 / 5200 MHz



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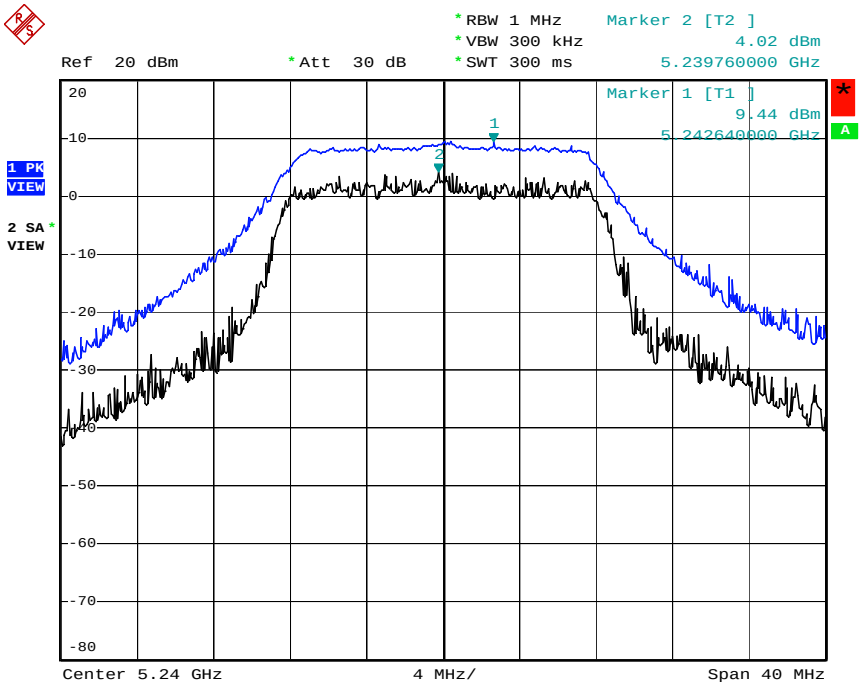
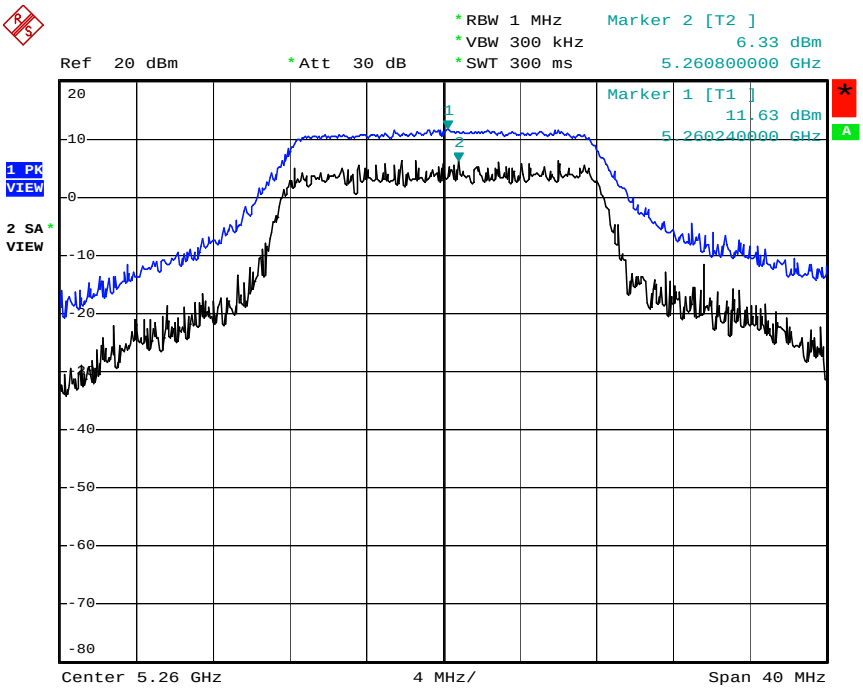
Channel: 48 / 5240 MHz



Date: 12.JAN.2005 14:42:23

Channel: 52 / 5260 MHz



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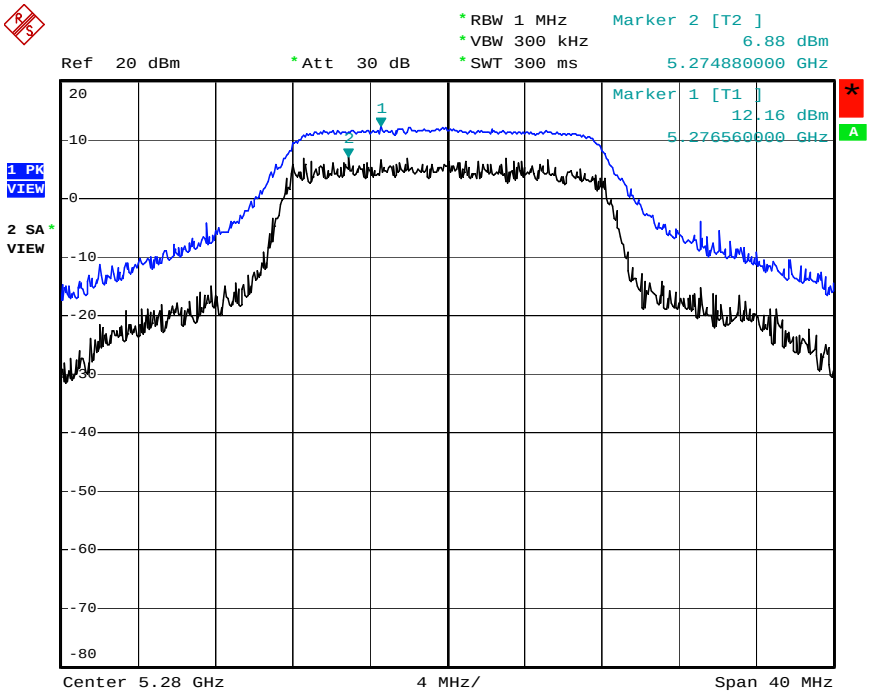
Channel: 56 / 5280 MHz



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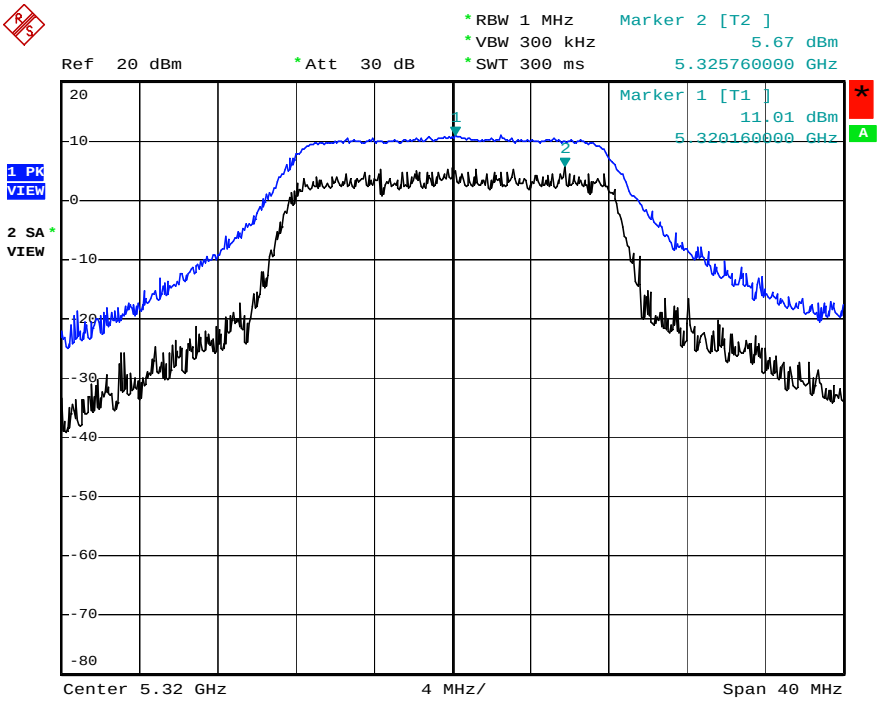
Channel: 64 / 5320 MHz



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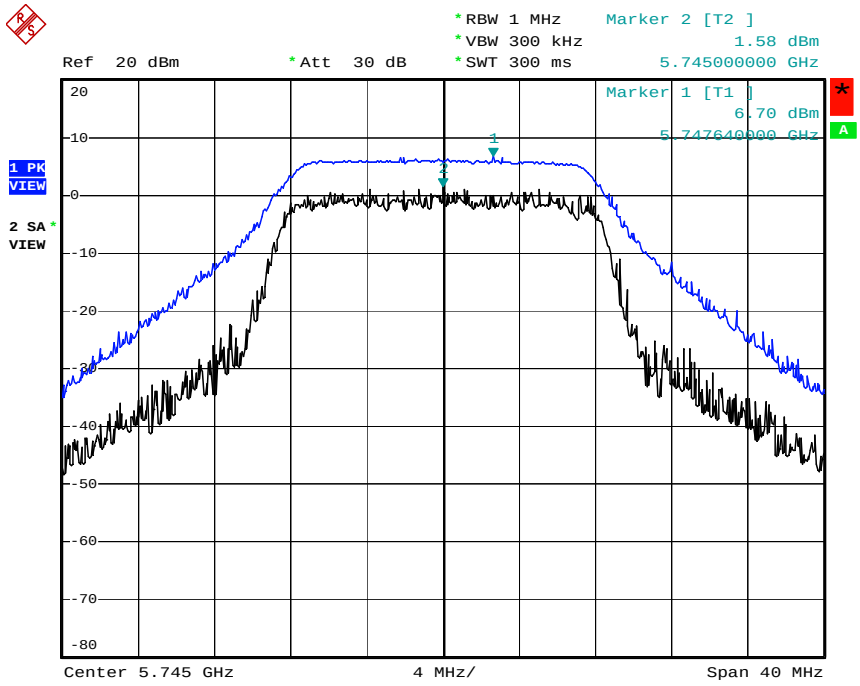
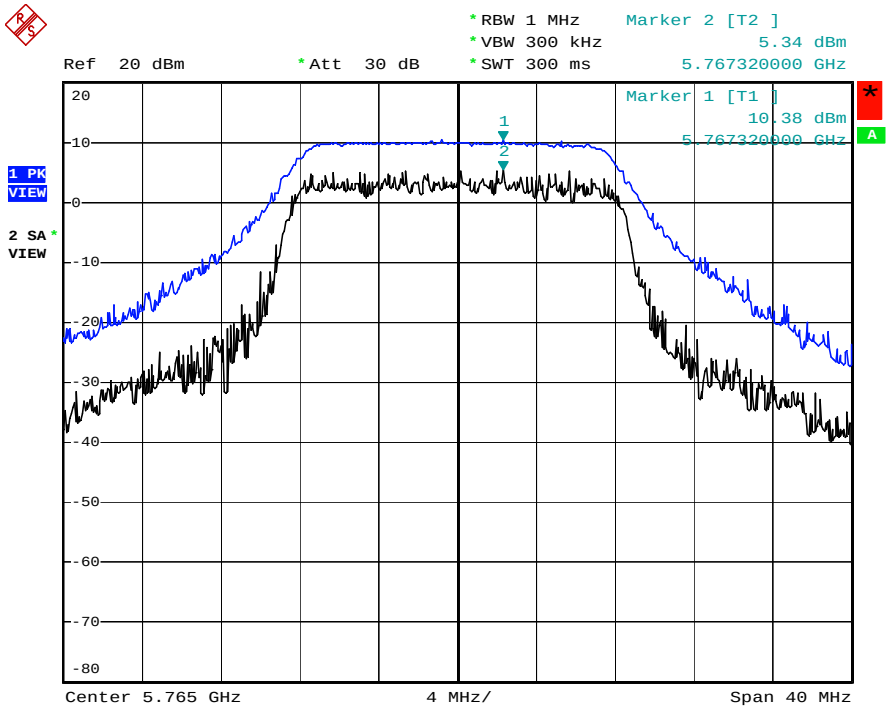
Channel: 100 / 5745 MHz



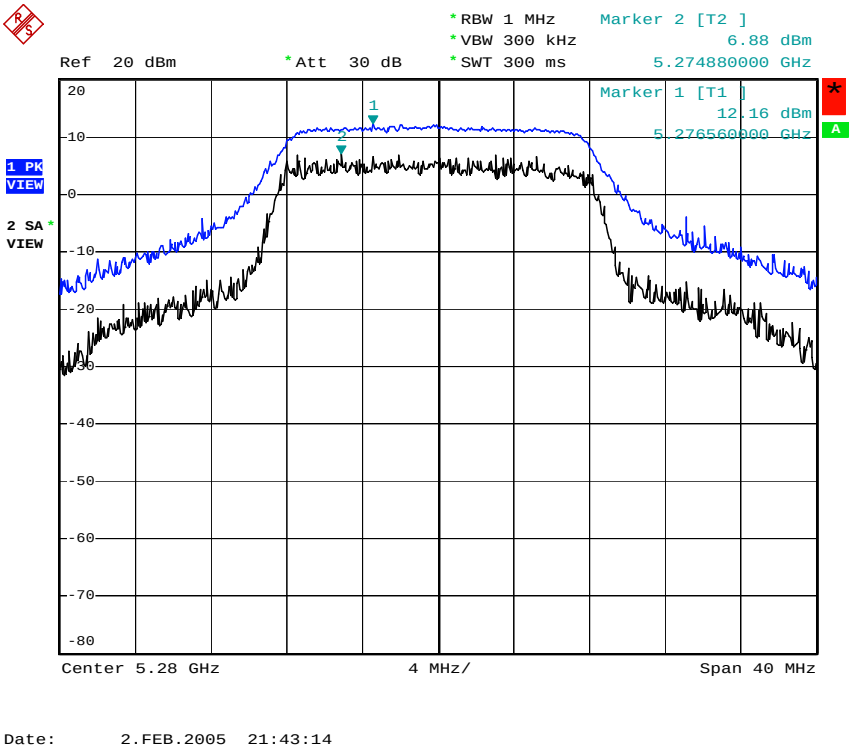
Date: 2.FEB.2005 21:44:57

Channel: 104 / 5765 MHz



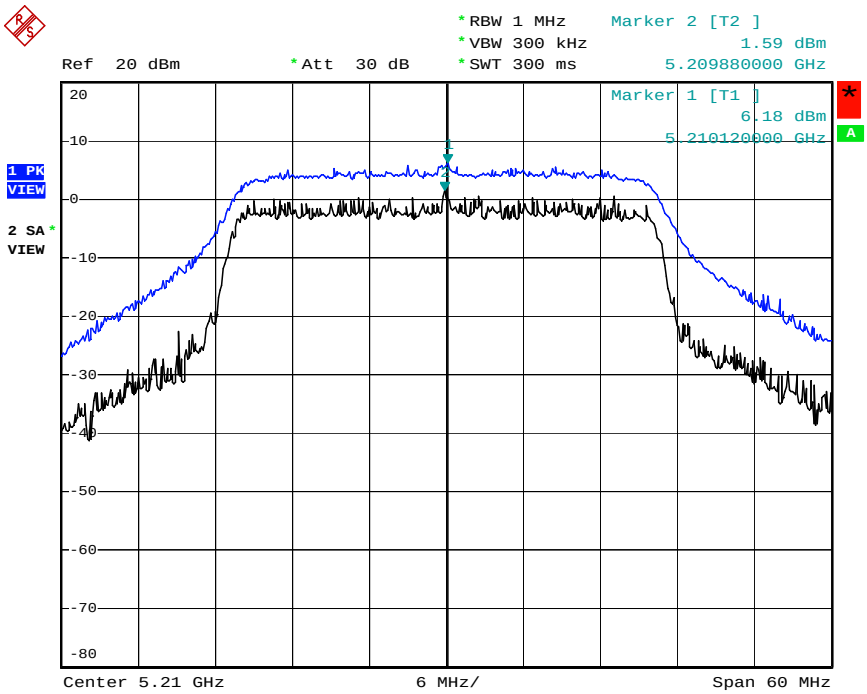
Date: 2.FEB.2005 21:46:03

Channel: 112 / 5805 MHz

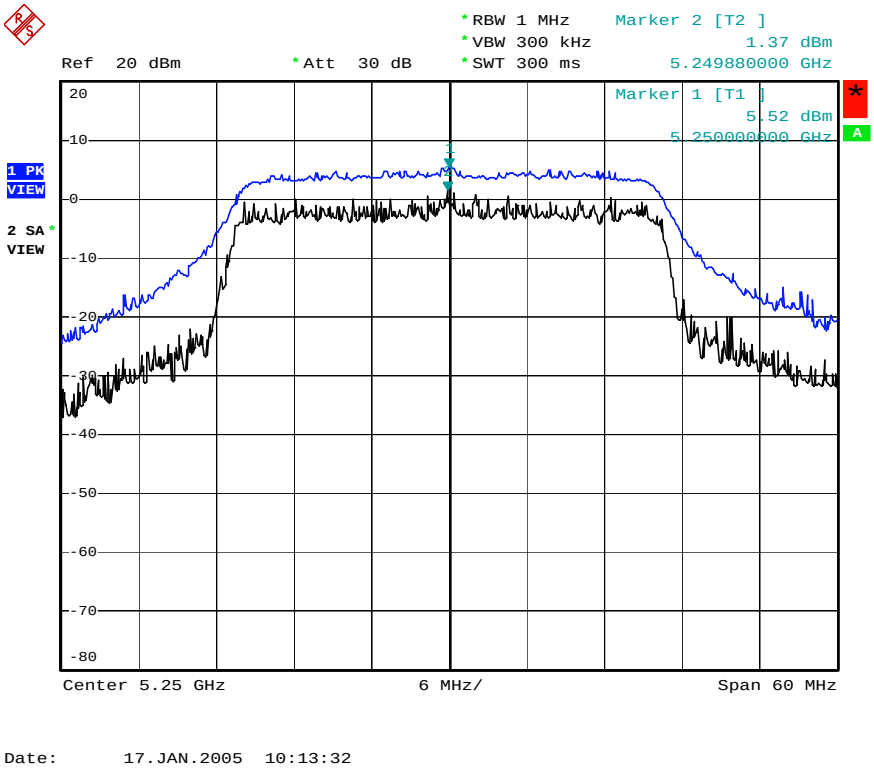


Turbo Mode

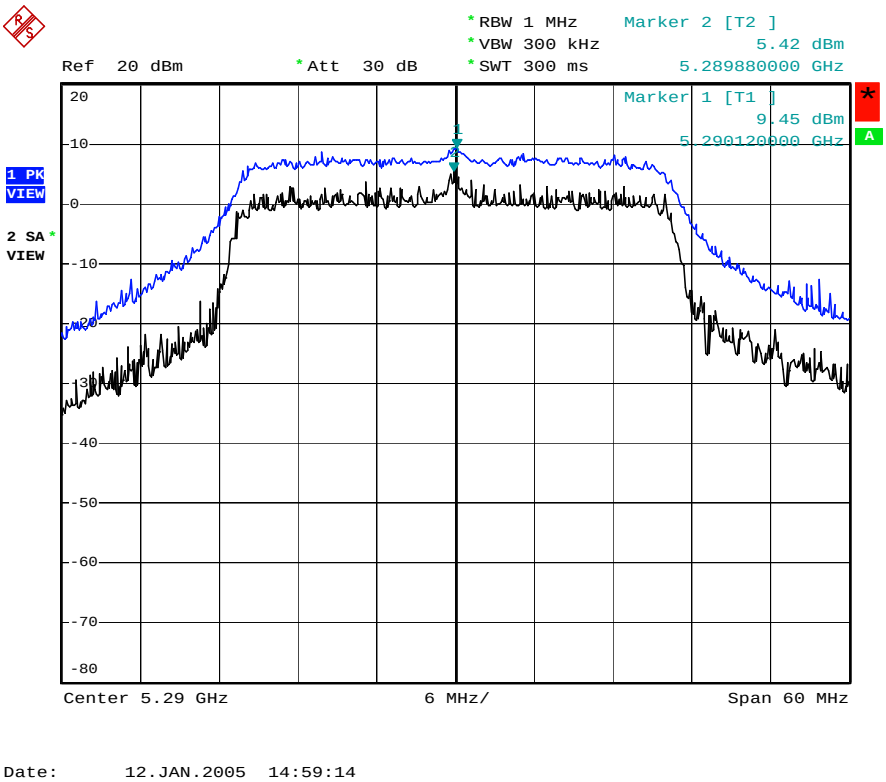
Channel: 42 / 5210 MHz



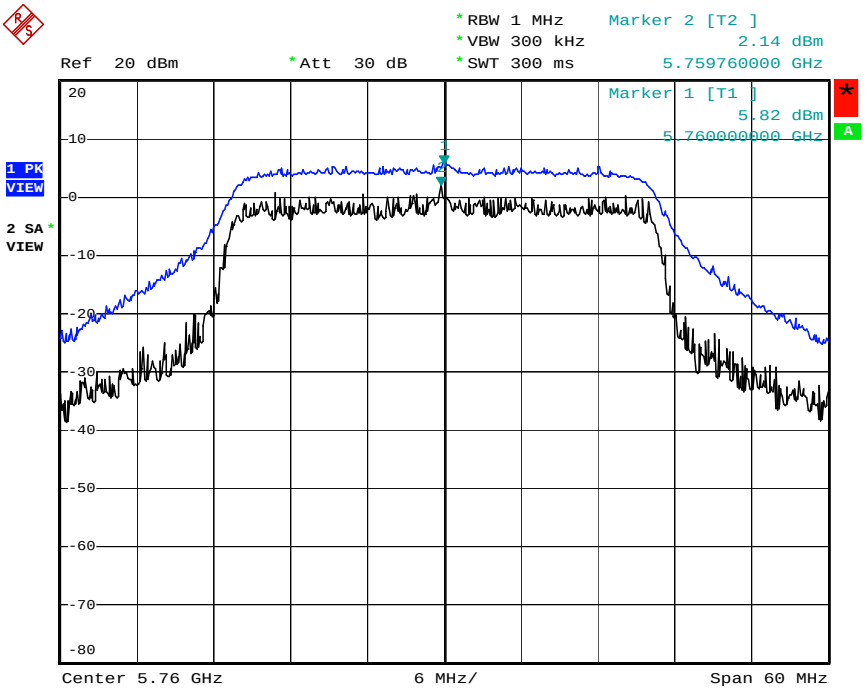
Channel: 50 / 5250 MHz



Channel: 58 / 5290 MHz

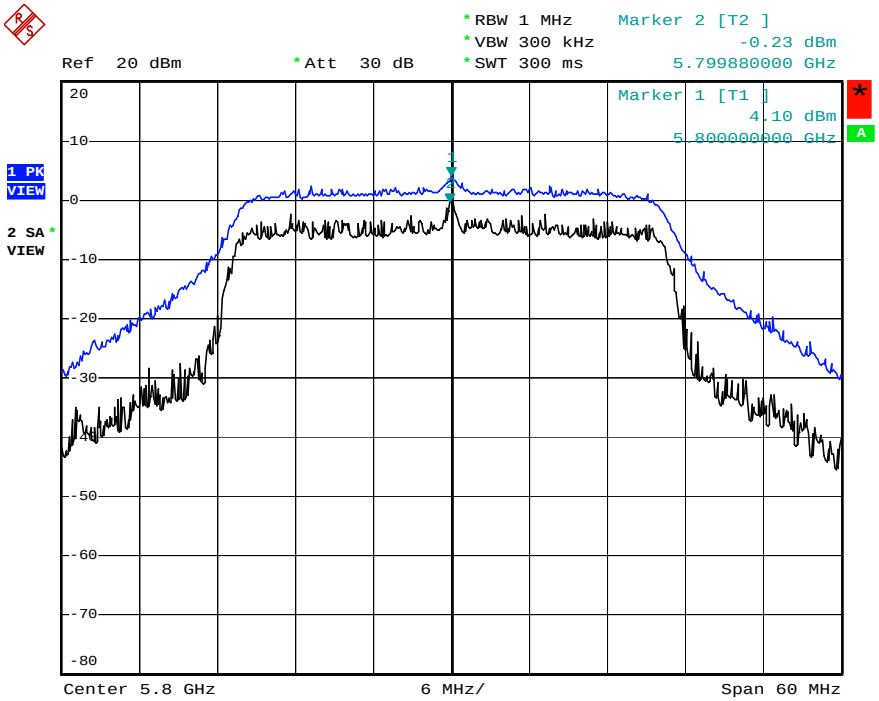


Channel: 103 / 5760 MHz



Date: 12.JAN.2005 15:01:12

Channel: 108 / 5800 MHz



Date: 12.JAN.2005 15:04:32

5.5. Test of Band Edges Emission

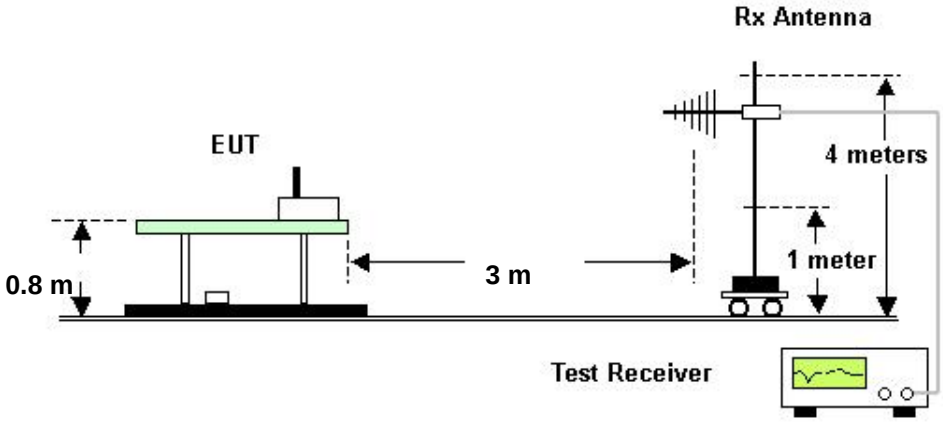
5.5.1. Measuring Instruments

Please reference item 6~17 in chapter 6 for the instruments used for testing.

5.5.2. Test Procedures

1. Configure the EUT according to ANSI C63.4.
2. The EUT was placed on the top of the turntable 0.8 meter above ground.
3. 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.
4. The transmitter is set to the lowest channel of each band.
5. The turntable was rotated 360 degrees to determine the position of the highest radiation.
6. Set both RBW and VBW of spectrum analyzer to 1MHz with convenient frequency span including 1MHz bandwidth from lower band edge.
7. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emission field strength of both horizontal and vertical polarization. Record the maximum value of band-edge.
8. Remove the transmitter and replace it with a broadband substitution antenna.
9. With the substitution antennas at maximum polarized and with the signal generator tuned to a particular fundamental frequency, raise and lower the test antenna to obtain a maximum reading at the spectrum analyzer. Adjust the level of the signal generator output until the previously recorded maximum reading (item 6). This should be done carefully repeating the adjustment of the test antenna and generator output.
10. Pd(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBi). Pd is the dipole equivalent power and Pg is the generator output power into the substitution antenna.
11. The lowest and highest channels of band edges of each band emission was measured and recorded.

5.5.3. Test Setup Layout



5.5.4. Test Result

- Temperature: 24°C
- Relative Humidity: 51%
- Duty Cycle of the Equipment During the Test: 100.00%
- Test Engineer: Sam Lee

Normal Mode

Ant. No.	Gain (dBi)	Freq. Band (MHz)	Freq. (MHz)	Level* (dBm/MHz)	Margin (dB)	Limit (dBm/MHz)
1	4.00	5150~5250	5149.80	-37.61	-10.61	-27
1	4.00	5250~5350	5352.00	-27.46	-0.46	-27
1	4.00	5725~5825	5700.00	-39.66	-12.66	-27
1	4.00	5725~5825	5725.00	-26.79	-9.79	-17
1	4.00	5725~5825	5825.00	-32.18	-15.18	-17
1	4.00	5725~5825	5842.40	-41.94	-14.94	-27
4	4.00	5150~5250	5149.80	-37.61	-10.61	-27
4	4.00	5250~5350	5352.00	-27.46	-0.46	-27
4	4.00	5725~5825	5700.00	-39.66	-12.66	-27
4	4.00	5725~5825	5725.00	-26.79	-9.79	-17
4	4.00	5725~5825	5825.00	-32.18	-15.18	-17
4	4.00	5725~5825	5842.40	-41.94	-14.94	-27

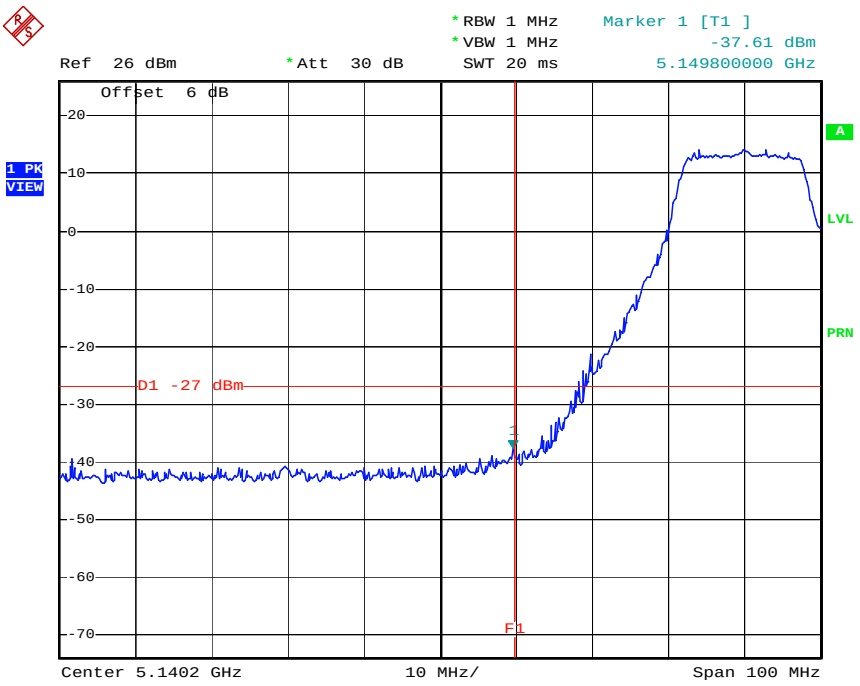
Level*: The max EIRP emission in the band-edge.

Turbo Mode

Ant. No.	Gain (dBi)	Freq. Band (MHz)	Freq. (MHz)	Level* (dBm/MHz)	Margin (dB)	Limit (dBm/MHz)
1	4.00	5150~5250	5148.00	-38.67	-11.67	-27
1	4.00	5250~5350	5353.60	-30.22	-3.22	-27
1	4.00	5725~5825	5712.40	-34.49	-7.49	-27
1	4.00	5725~5825	5724.60	-28.48	-11.48	-17
1	4.00	5725~5825	58260	-24.64	-7.64	-17
1	4.00	5725~5825	5835.40	-36.37	-9.37	-27
4	4.00	5150~5250	5148.00	-38.67	-11.67	-27
4	4.00	5250~5350	5353.60	-30.22	-3.22	-27
4	4.00	5725~5825	5712.40	-34.49	-7.49	-27
4	4.00	5725~5825	5724.60	-28.48	-11.48	-17
4	4.00	5725~5825	5826.00	-24.64	-7.64	-17
4	4.00	5725~5825	5835.40	-36.37	-9.37	-27

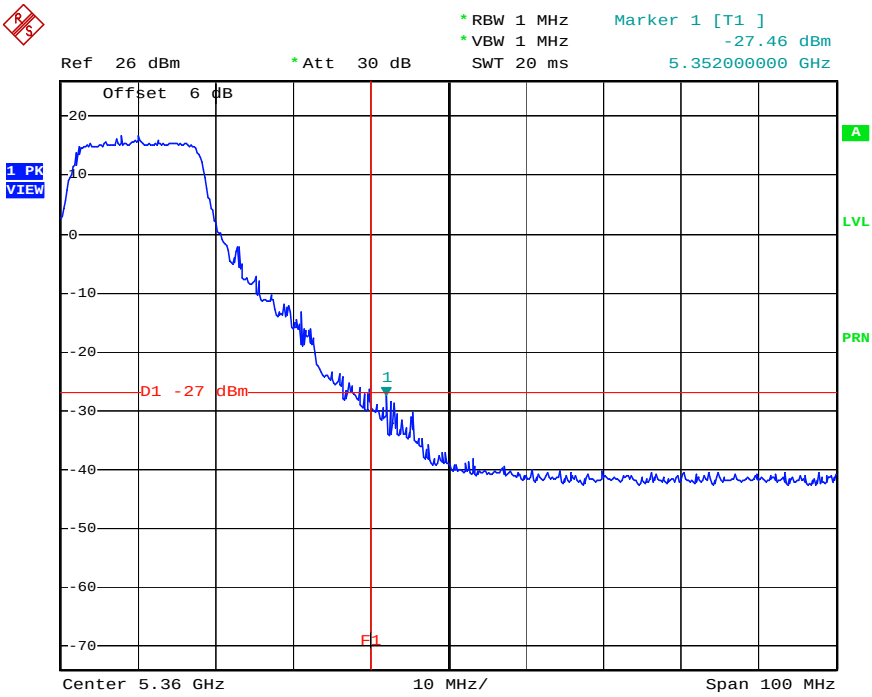
Normal Mode

Channel: 36 / 5180 MHz



Date: 12.JAN.2005 18:17:01

Channel: 64 / 5320 MHz



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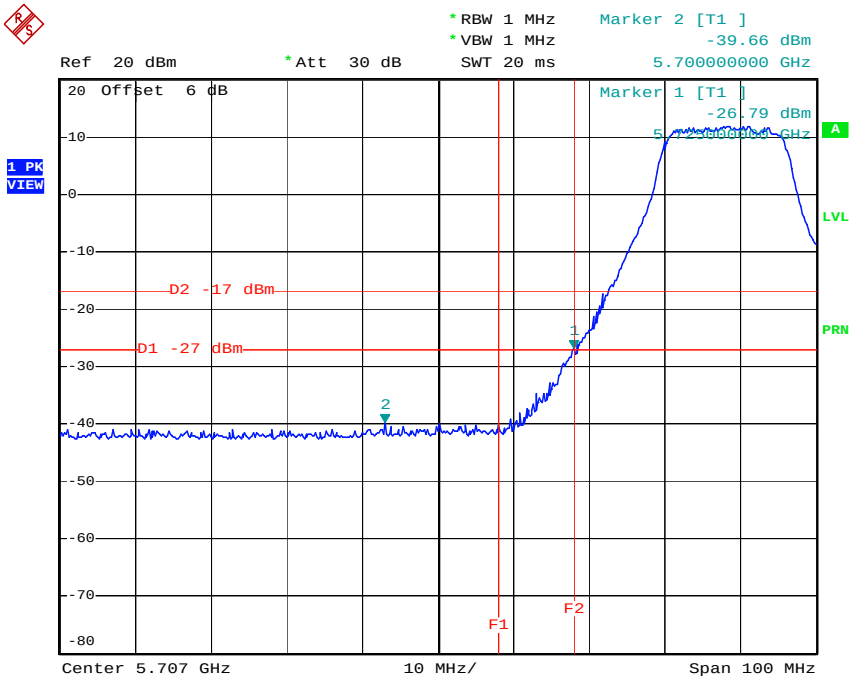
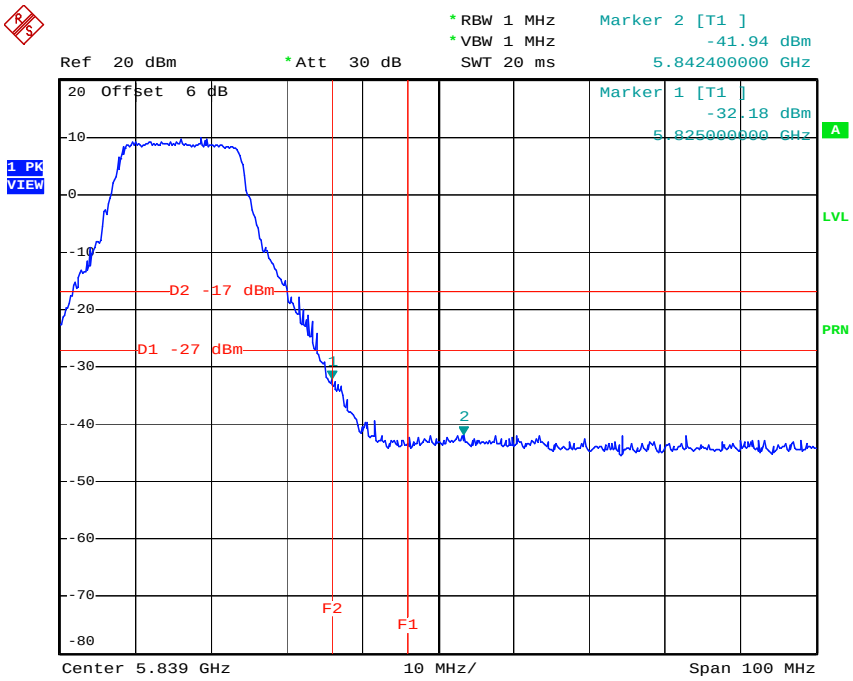
Channel: 100 / 5745 MHz



Date: 2.FEB.2005 22:01:23

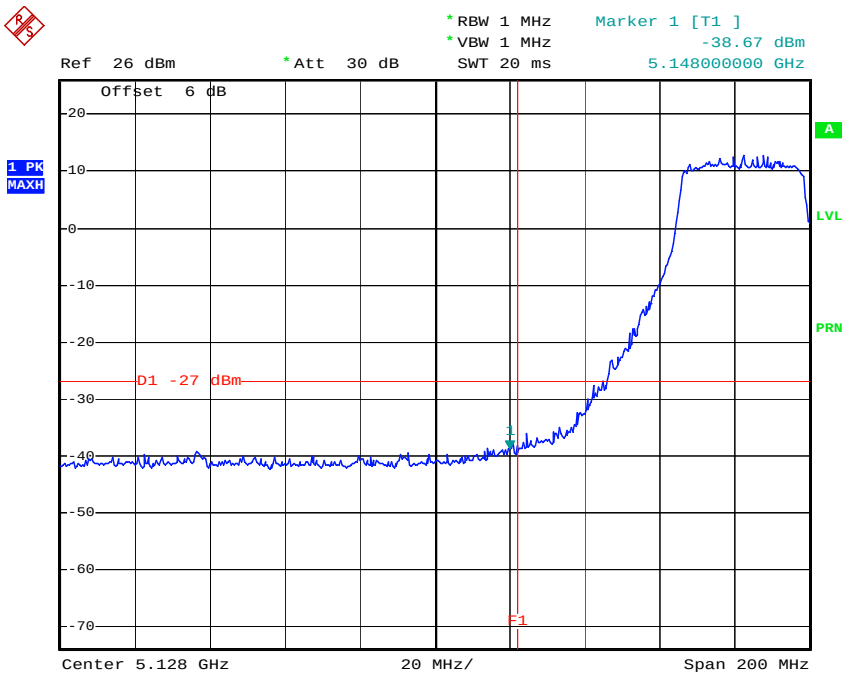
Channel: 112 / 5805 MHz



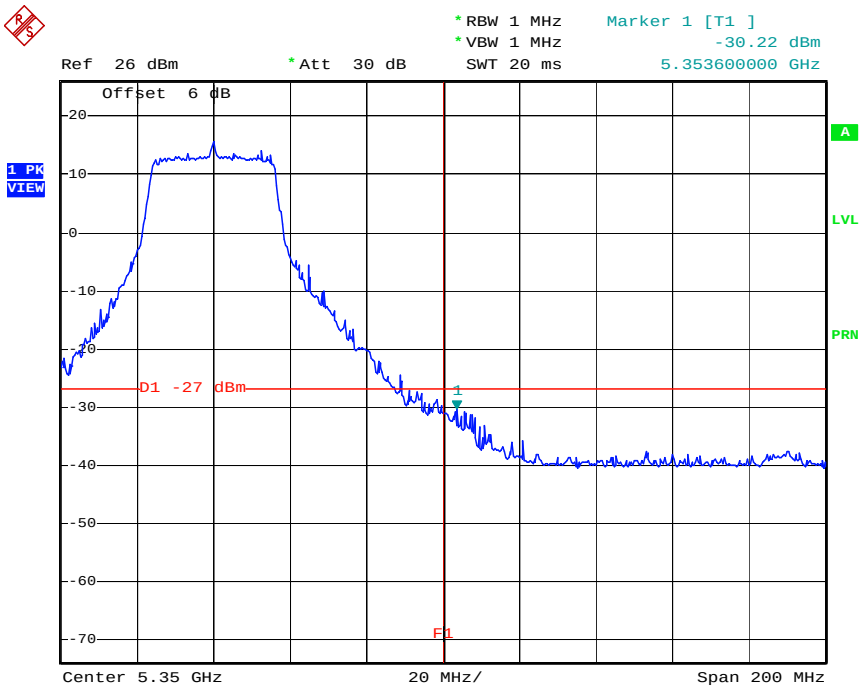
Date: 2.FEB.2005 22:04:00

Turbo Mode

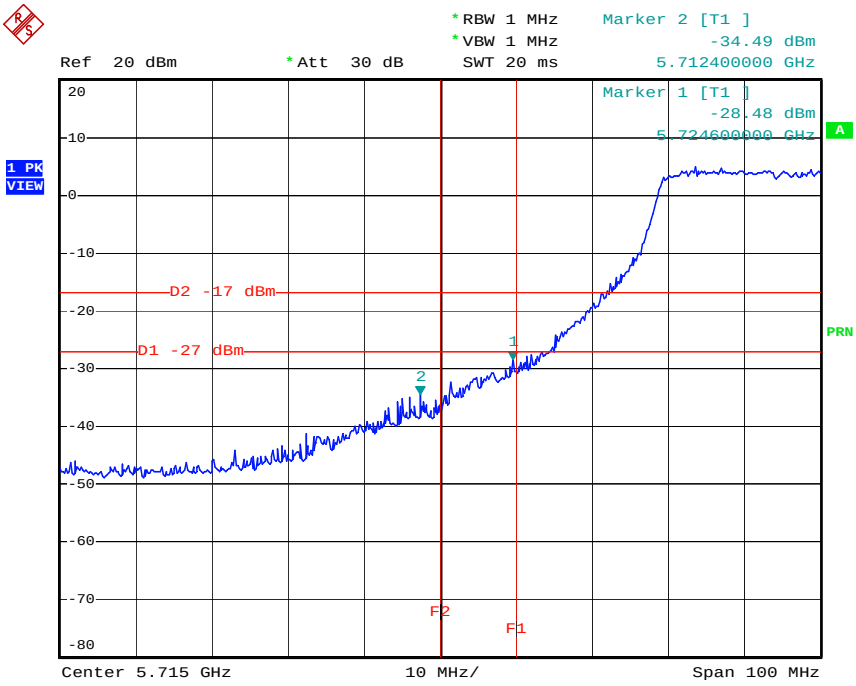
Channel: 42 / 5210 MHz



Channel: 58 / 5290 MHz

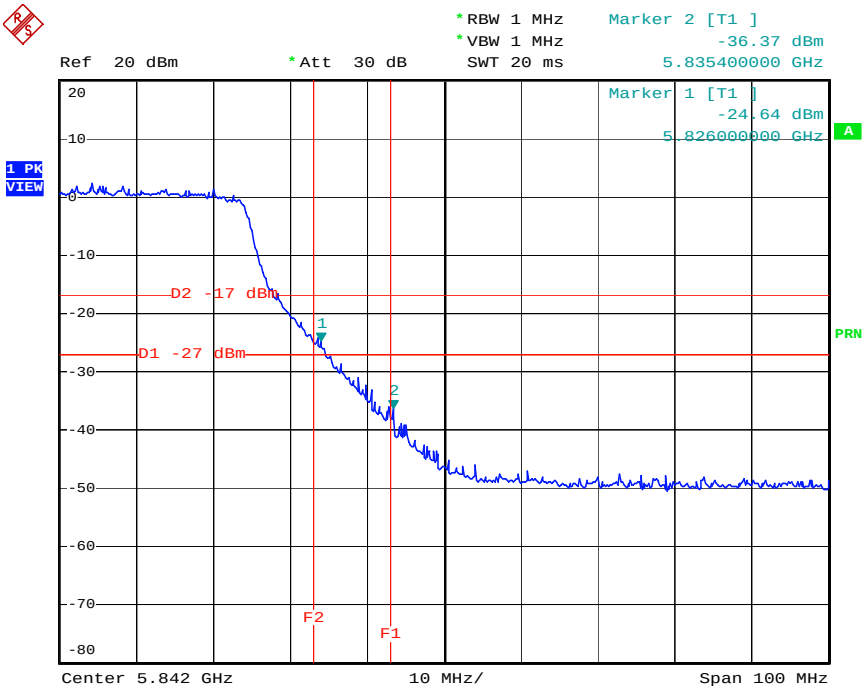


Channel: 103 / 5760 MHz



Date: 26.JAN.2005 17:58:53

Channel: 108 / 5800 MHz



Date: 26.JAN.2005 17:56:05

5.6. Test of Frequency Stability

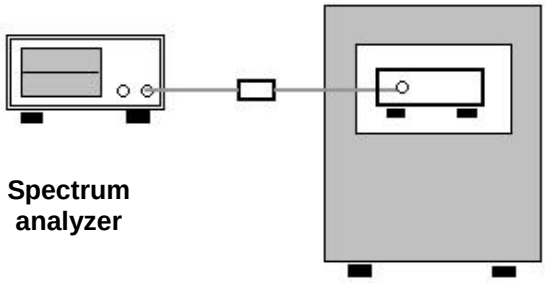
5.6.1. Measuring Instruments

Item 18 of the table is on section 6.

5.6.2. Test Procedures

1. The transmitter output is connected to the spectrum analyzer through an attenuator.
2. Set RBW of spectrum analyzer to 10kHz and VBW to 10kHz.
3. Use mark counter function to counter the peak un-modulation carrier frequency.
4. The test extreme voltage is, according to 2.1055(d)(1), is to change the primary supply voltage from 85 to 115 percent of the nominal value
5. Extreme temperature rule is, according to 2.1055(a)(1), -30˚C~50˚C.

5.6.3. Test Setup Layout



5.6.4. Test Result

- Modulation Type: Un-Modulated Carrier
- Temperature: 25°C
- Relative Humidity: 62 %
- Duty cycle of the equipment during the test: 100%

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)	
(V)	5260.0000	5745.0000
126.50	5259.9987	5744.9986
110.00	5259.9980	5744.9965
93.50	5259.9974	5744.9984
Max. Deviation (MHz)	0.0026	0.0035
Max. Deviation (ppm)	0.49	0.61

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)	
(°C)	5260.0000	5745.0000
-30	5260.0047	5745.0122
-20	5260.0032	5745.0085
-10	5259.9984	5744.9976
0	5259.9960	5744.9957
10	5259.9948	5744.9934
20	5259.9940	5744.9927
30	5259.9927	5744.9892
40	5259.9896	5744.9871
50	5259.9840	5744.9865
Max. Deviation (MHz)	0.0160	0.0135
Max. Deviation (ppm)	3.04	2.35

5.7. Test of AC Power Line Conducted Emission

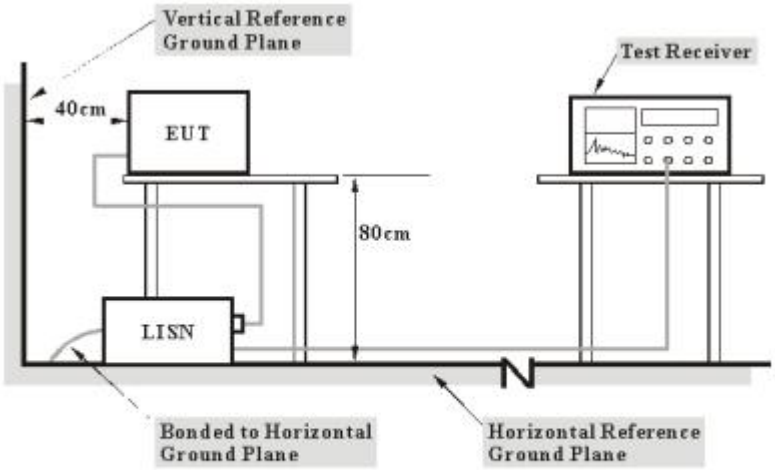
5.7.1. Measuring Instruments

Please reference item 1~5 in chapter 6 for the instruments used for testing.

5.7.2. Test Procedures

1. Configure the EUT according to ANSI C63.4.
2. The 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.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN)
4. All the support units are connected to the other LISNs. The LISN should provides 50uH/50ohms coupling impedance.
5. The frequency range from 150 KHz to 30 MHz was searched.
6. Use the Channel & Power Controlling software to make the EUT working on selected channel and expected output power, then use the “H” Patter Generator software to make the supporting equipments stay on working condition.
7. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
8. The measurement has to be done between each power line and ground at the power terminal for each RF channel. Only one RF channel has to be investigated since this test is independent with the RF channel selection.

5.7.3. Test Setup Layout

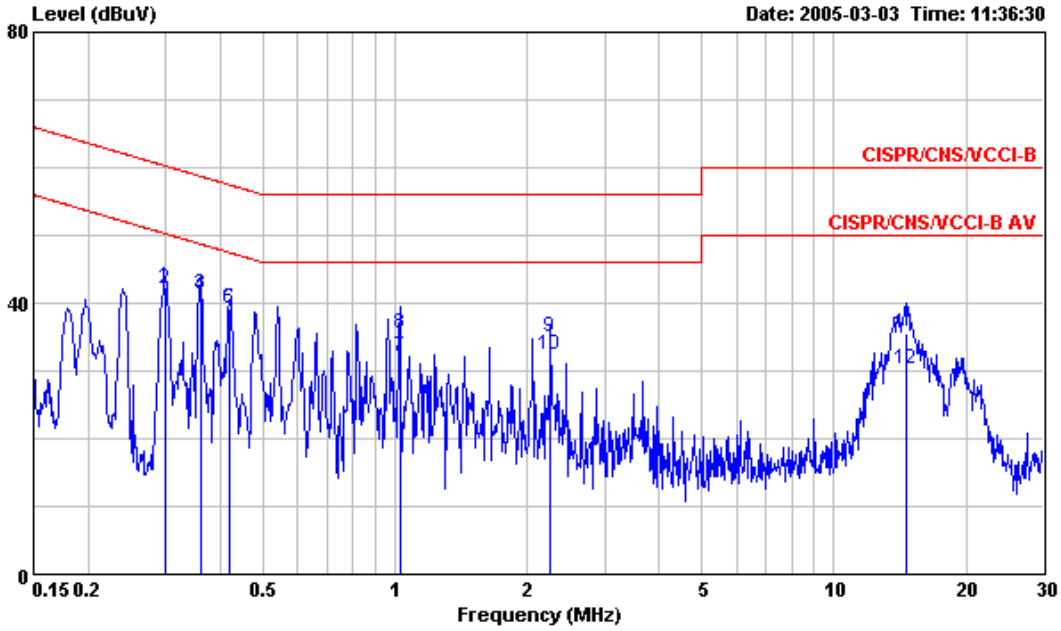


Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

5.7.4. Test Result of Conducted Emission

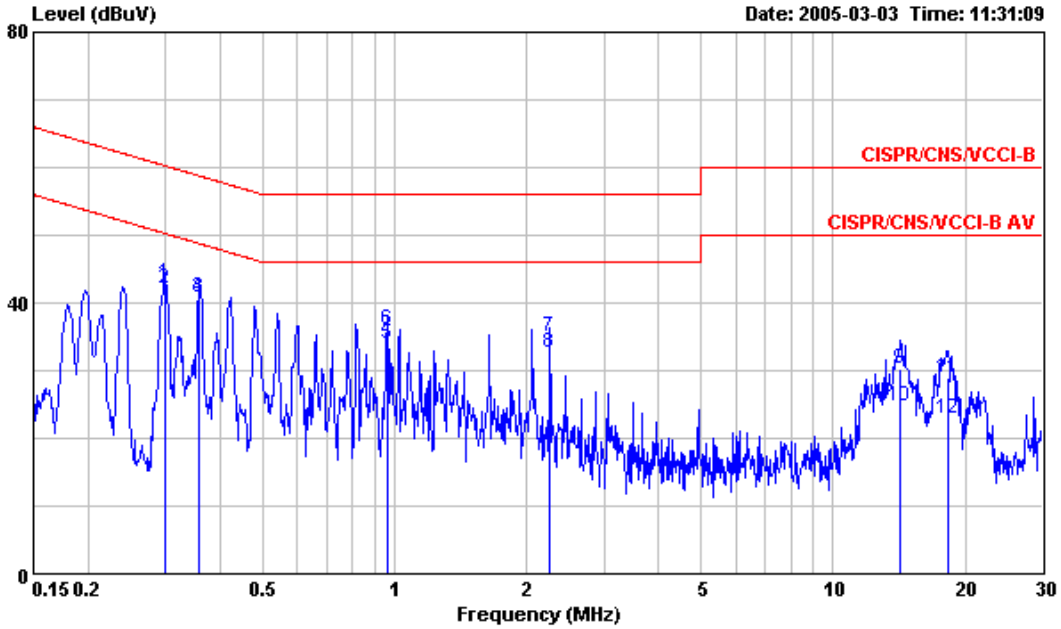
- Temperature: 24°C
- Relative Humidity: 51%
- Test Engineer: Sky Wu

Line to Ground



	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.2988450	42.47	-17.80	60.27	42.09	0.06	0.32	QP
2	0.2988450	42.21	-8.06	50.27	41.83	0.06	0.32	Average
3	0.3602770	41.20	-17.52	58.72	40.85	0.06	0.29	QP
4	0.3602770	41.01	-7.71	48.72	40.66	0.06	0.29	Average
5	0.4202150	39.33	-18.11	57.44	39.01	0.06	0.26	QP
6	0.4202150	39.23	-8.21	47.44	38.91	0.06	0.26	Average
7	1.024	32.01	-13.99	46.00	31.28	0.11	0.62	Average
8	1.024	35.44	-20.56	56.00	34.71	0.11	0.62	QP
9	2.254	35.10	-20.90	56.00	34.74	0.13	0.23	QP
10	2.254	32.49	-13.51	46.00	32.13	0.13	0.23	Average
11	14.591	35.50	-24.50	60.00	34.28	0.21	1.01	QP
12	14.591	30.21	-19.79	50.00	28.99	0.21	1.01	Average

Neutral to Ground

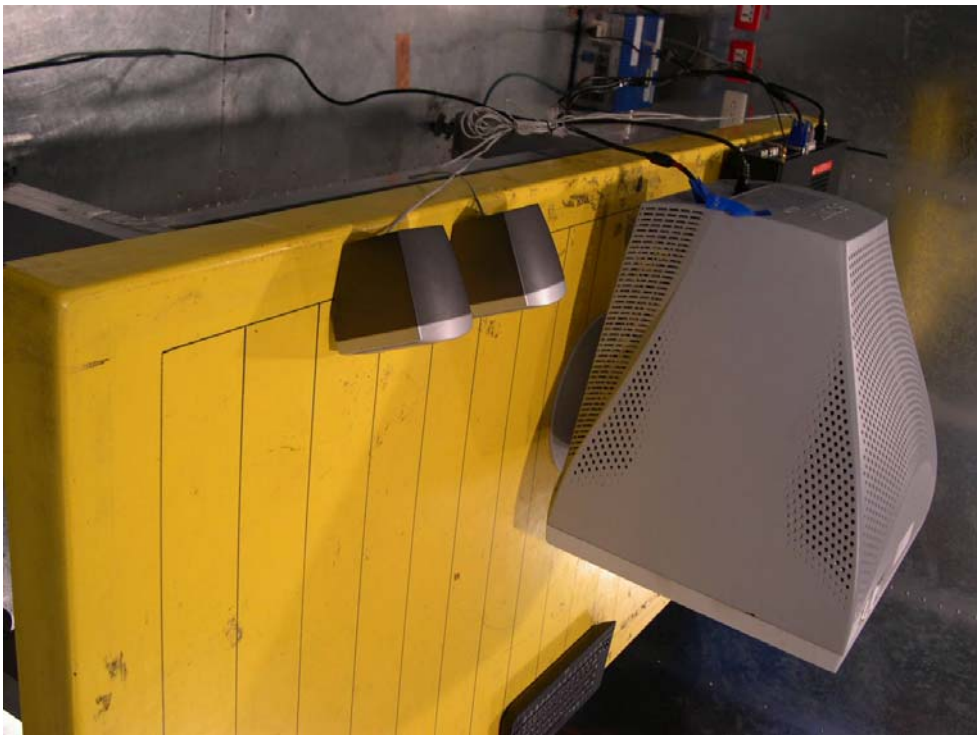


	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.2999730	42.77	-17.47	60.24	42.34	0.11	0.32	QP
2	0.2999730	41.97	-8.27	50.24	41.54	0.11	0.32	Average
3	0.3589320	40.74	-8.01	48.75	40.34	0.11	0.29	Average
4	0.3589320	40.78	-17.97	58.75	40.38	0.11	0.29	QP
5	0.9620010	33.85	-12.15	46.00	32.97	0.23	0.65	Average
6	0.9620010	36.09	-19.91	56.00	35.21	0.23	0.65	QP
7	2.254	34.94	-21.06	56.00	34.48	0.23	0.23	QP
8	2.254	32.64	-13.36	46.00	32.18	0.23	0.23	Average
9	14.211	30.34	-29.66	60.00	28.88	0.33	1.13	QP
10	14.211	24.81	-25.19	50.00	23.35	0.33	1.13	Average
11	18.330	28.87	-31.13	60.00	28.13	0.40	0.34	QP
12	18.330	23.00	-27.00	50.00	22.26	0.40	0.34	Average

5.7.5. Photographs of Conducted Emission Test Configuration

FRONT VIEW

REAR VIEW



5.8. Test of Spurious Radiated Emission

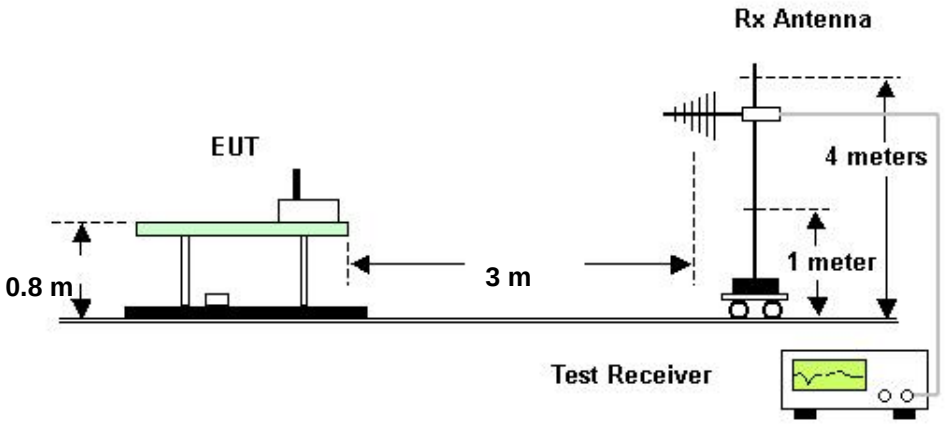
5.8.1. Measuring Instruments

Please reference item 6~17 in chapter 6 for the instruments used for testing.

5.8.2. Test Procedures

1. Configure the EUT according to ANSI C63.4.
2. The EUT was placed on the top of the turn table 0.8 meter above ground.
3. 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 turn table.
4. Power on the EUT and all the supporting units.
5. The turn table was rotated by 360 degrees to determine the position of the highest radiation.
6. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emission field strength of both horizontal and vertical polarization.
7. For each suspected emission, the antenna tower was scan (from 1 M to 4 M) and then the turn table was rotated (from 0 degree to 360 degrees) to find the maximum reading.
8. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
9. For emission above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
10. If the emission 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 and average method for above the 1GHz. the reported.
11. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB higher than average limit (that means the emission 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.

5.8.3. Test Setup Layout

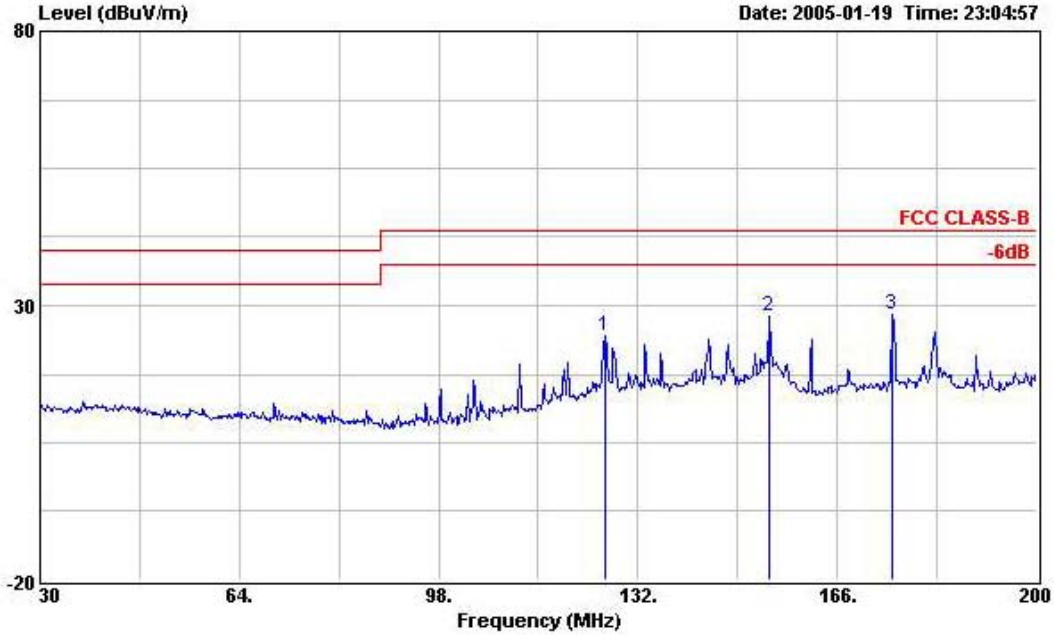


5.8.4. Test Results for CH 36/ 5180 MHz (for emission below 1GHz)

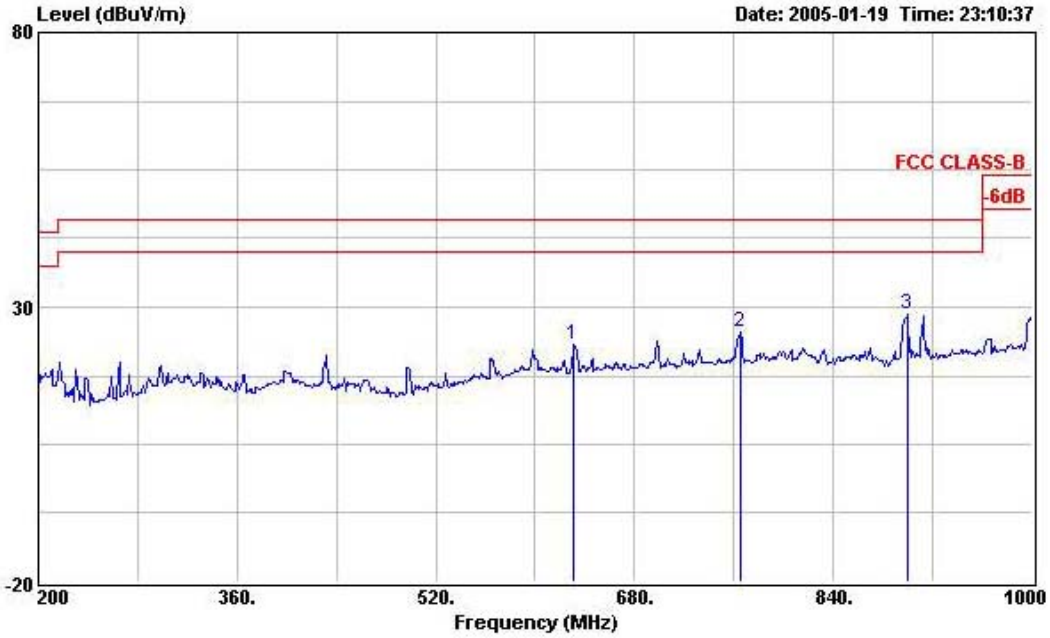
- **Normal Mode**
- Temperature: 24°C
- Relative Humidity: 51%
- Duty Cycle of the Equipment During the Test: 100.00%
- Test Engineer: Ted Chiu

Mode 1

(A) Polarization: Horizontal

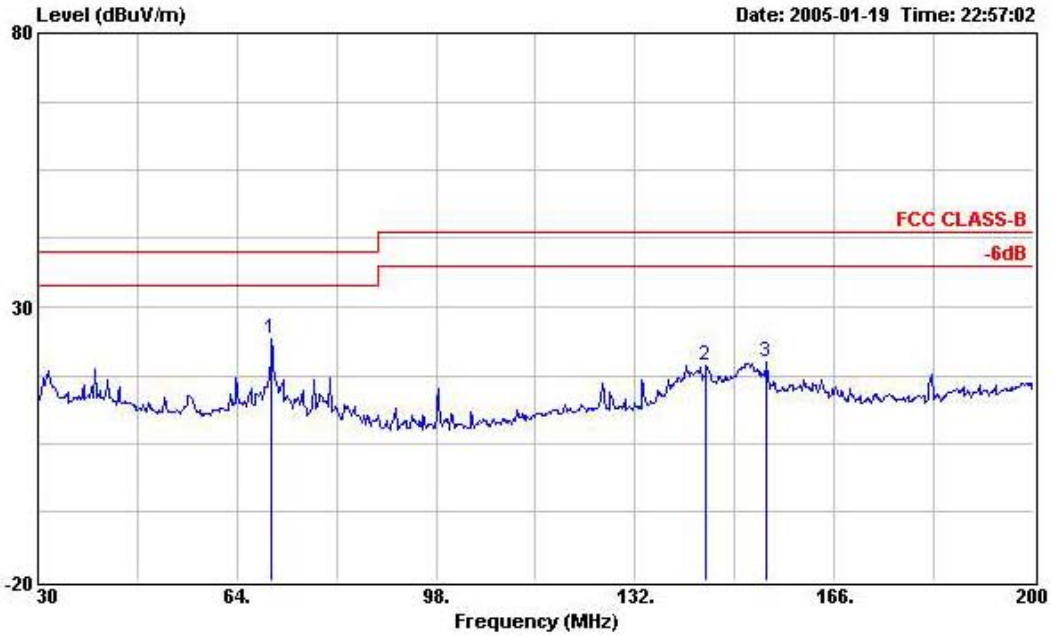


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	126.390	24.39	-19.11	43.50	39.30	12.24	0.00	27.15	Peak	---	---
2	154.270	28.06	-15.44	43.50	42.94	12.21	0.00	27.09	Peak	---	---
3	175.350	28.31	-15.19	43.50	41.16	14.20	0.00	27.05	Peak	---	---

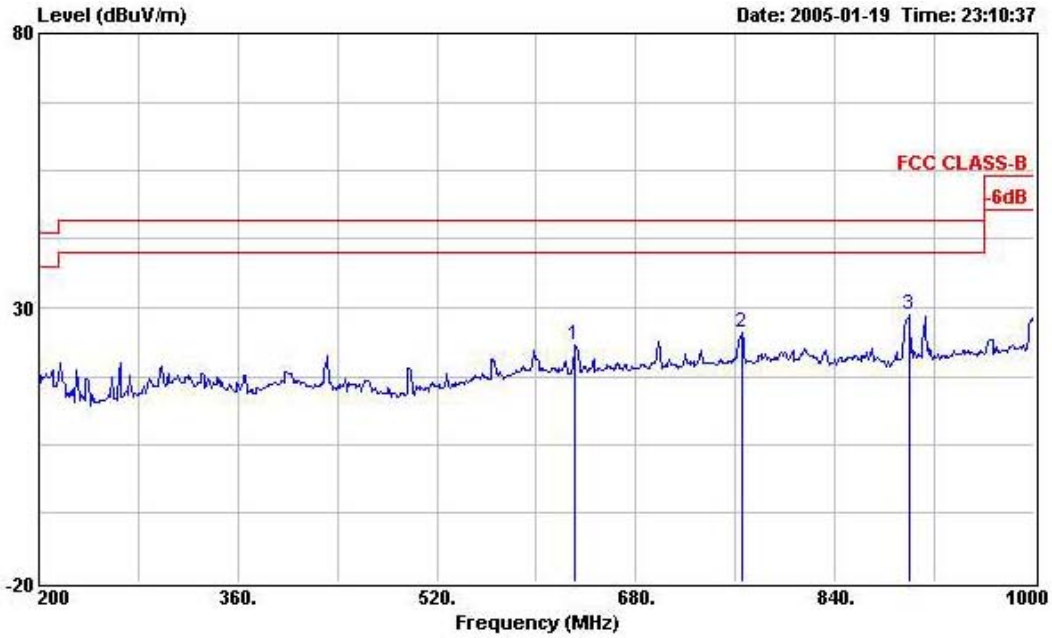


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	631.200	23.13	-22.87	46.00	30.95	20.49	0.00	28.31	Peak	---	---
2	764.800	25.39	-20.61	46.00	31.75	21.48	0.00	27.84	Peak	---	---
3	899.200	28.58	-17.42	46.00	34.08	21.70	0.00	27.20	Peak	---	---

(B) Polarization: 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	69.950	24.13	-15.87	40.00	41.77	9.80	0.00	27.44	Peak	---	---
2	144.070	19.42	-24.08	43.50	34.22	12.31	0.00	27.11	Peak	---	---
3	154.270	19.95	-23.55	43.50	34.83	12.21	0.00	27.09	Peak	---	---

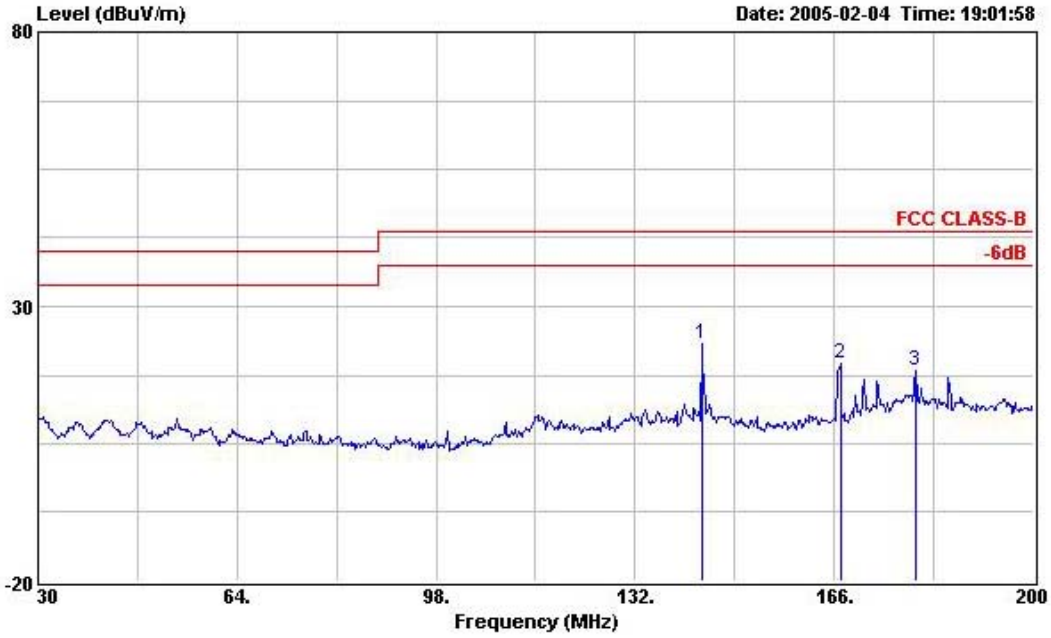


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	631.200	23.13	-22.87	46.00	30.95	20.49	0.00	28.31	Peak	---	---
2	764.800	25.39	-20.61	46.00	31.75	21.48	0.00	27.84	Peak	---	---
3	899.200	28.58	-17.42	46.00	34.08	21.70	0.00	27.20	Peak	---	---

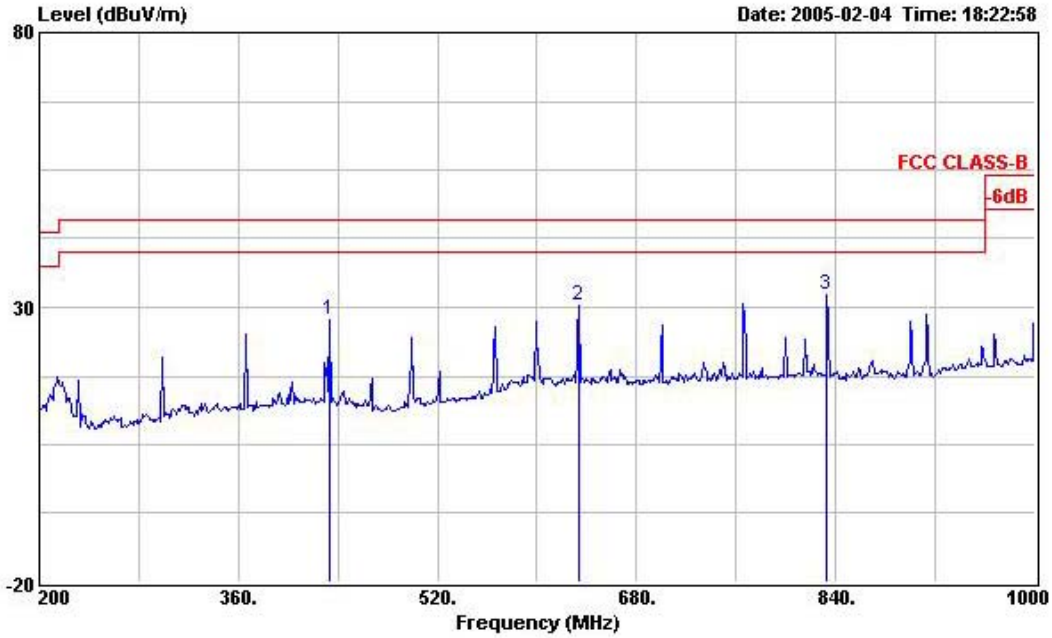
Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

Mode 2

(A) Polarization: Horizontal

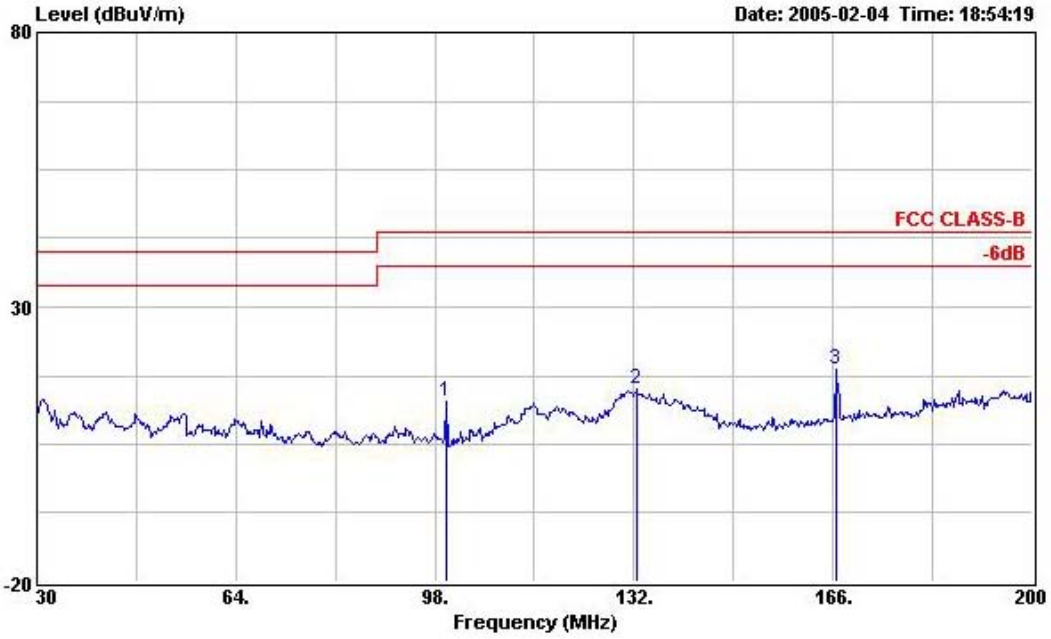


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	143.390	23.19	-20.31	43.50	41.49	12.35	0.00	30.65	Peak	---	---
2	167.020	19.49	-24.01	43.50	36.19	13.36	0.00	30.06	Peak	---	---
3	179.940	18.36	-25.14	43.50	34.18	14.20	0.00	30.02	Peak	---	---

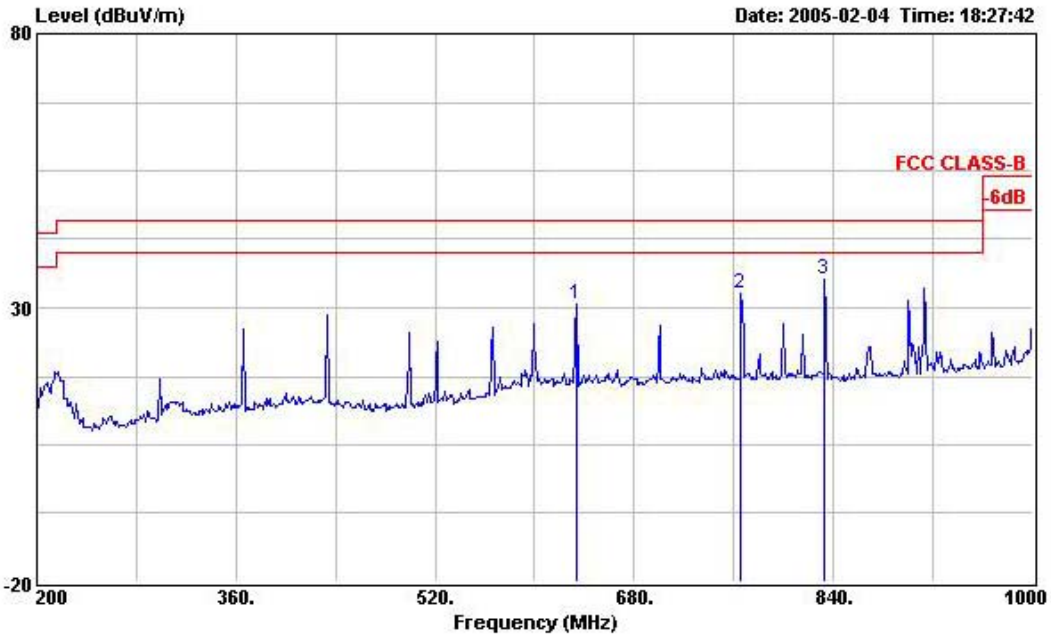


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	432.800	27.63	-18.37	46.00	41.76	16.54	0.00	30.67	Peak	---	---
2	633.600	30.37	-15.63	46.00	40.56	20.50	0.00	30.69	Peak	---	---
3	832.800	32.35	-13.65	46.00	40.93	21.83	0.00	30.41	Peak	---	---

(B) Polarization: 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	99.870	12.64	-30.86	43.50	34.29	8.99	0.00	30.64	Peak	---	---
2	132.340	14.97	-28.53	43.50	33.29	12.39	0.00	30.71	Peak	---	---
3	166.510	18.79	-24.71	43.50	35.56	13.31	0.00	30.08	Peak	---	---

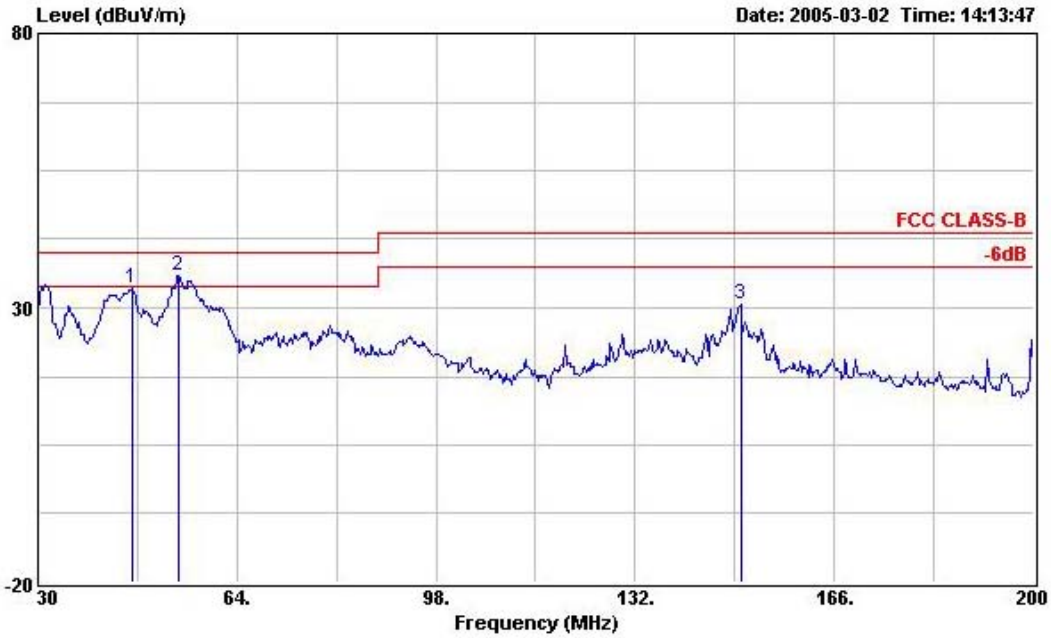


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	633.600	30.58	-15.42	46.00	40.77	20.50	0.00	30.69	Peak	---	---
2	765.600	32.54	-13.46	46.00	41.56	21.49	0.00	30.51	Peak	---	---
3	832.800	35.16	-10.84	46.00	43.74	21.83	0.00	30.41	Peak	---	---

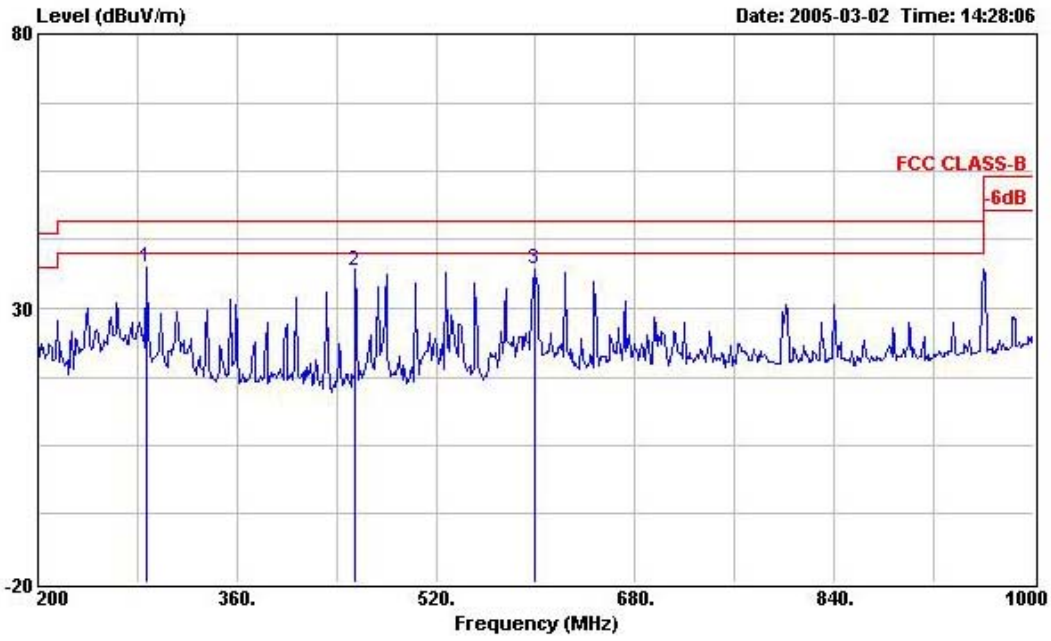
Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

Mode 3

(A) Polarization: Horizontal

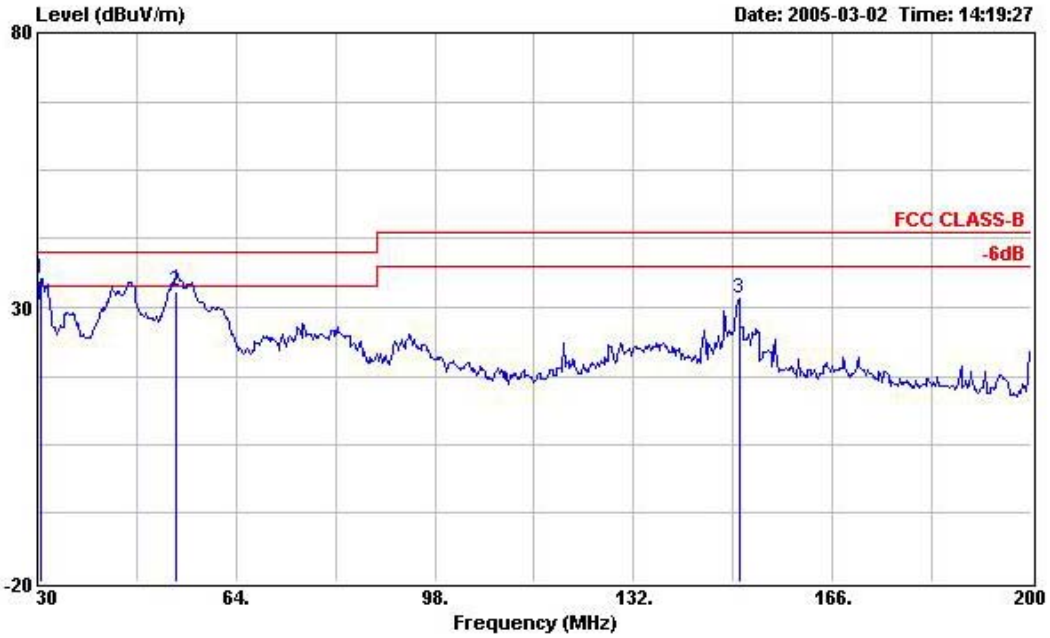


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	45.980	33.66	-6.34	40.00	51.04	12.19	0.66	30.23	Peak	---	---
2 !	54.140	35.97	-4.03	40.00	54.50	11.02	0.72	30.27	Peak	---	---
3	150.020	30.51	-12.99	43.50	47.84	11.90	1.20	30.43	Peak	---	---

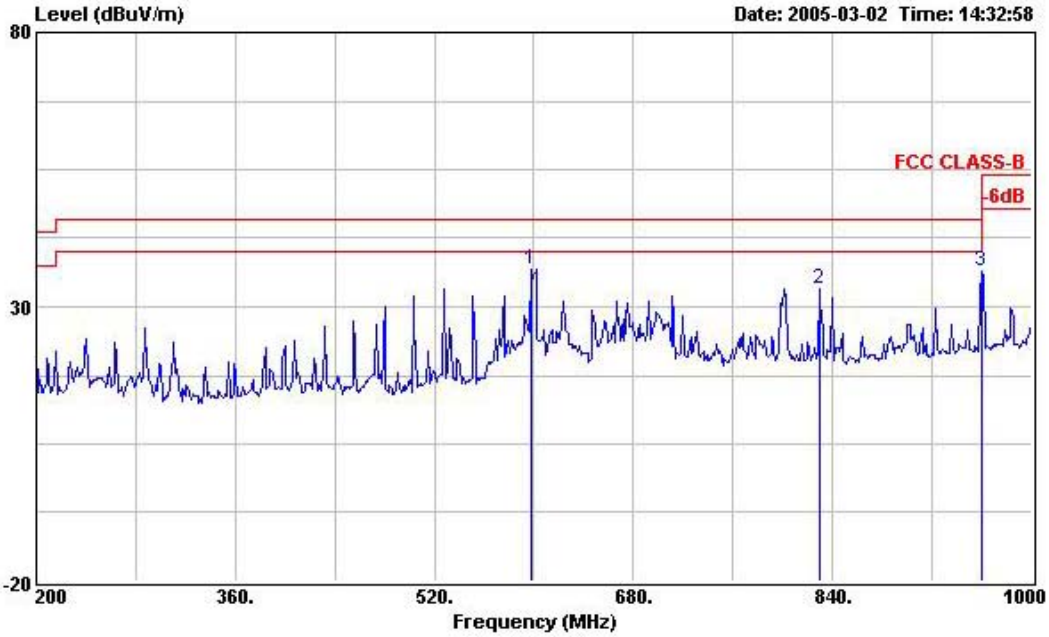


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	288.000	37.61	-8.39	46.00	53.01	13.46	1.68	30.54	Peak	---	---
2	455.200	36.98	-9.02	46.00	49.62	16.35	2.13	31.12	Peak	---	---
3	599.200	37.29	-8.71	46.00	45.62	20.36	2.40	31.09	Peak	---	---

(B) Polarization: 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 !	30.510	35.35	-4.65	40.00	52.16	12.90	0.57	30.28	Peak	---	---
2	53.630	32.94	-7.06	40.00	51.39	11.07	0.72	30.24	QP	---	---
3	150.020	31.51	-11.99	43.50	48.84	11.90	1.20	30.43	Peak	---	---



	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	598.400	36.87	-9.13	46.00	45.24	20.33	2.39	31.09	Peak	---	---
2	829.600	33.30	-12.70	46.00	39.04	21.84	2.87	30.45	Peak	---	---
3	960.000	36.36	-9.64	46.00	39.61	23.02	3.02	29.29	Peak	---	---

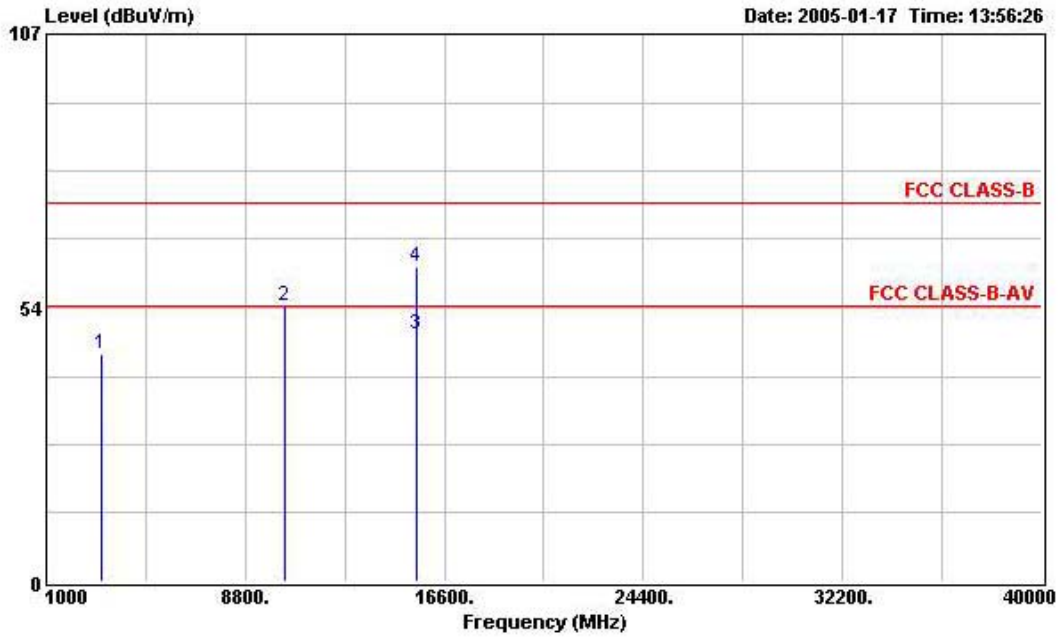
Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

5.8.5. Test Results for CH 36 / 5180 MHz (for emission above 1GHz)

- **Normal Mode**
- Temperature: 24°C
- Relative Humidity: 51%
- Duty Cycle of the Equipment During the Test: 100.00%
- Test Engineer: Ted Chiu

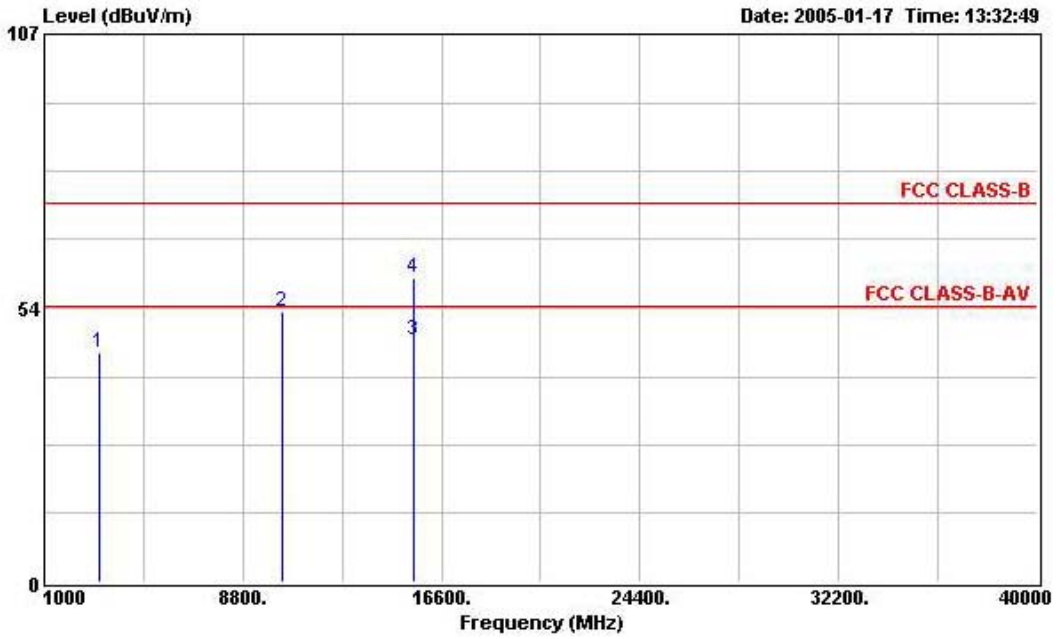
Mode 1

(A) Polarization: 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	3192.000	44.52	-29.48	74.00	51.02	30.48	2.26	39.24	Peak	---	---
2	10368.000	53.70	-20.30	74.00	49.15	38.90	4.27	38.62	Peak	---	---
3	15540.000	48.30	-5.70	54.00	43.34	37.77	5.18	37.99	Average	---	---
4	15540.000	61.42	-12.58	74.00	56.46	37.77	5.18	37.99	Peak	---	---

(B) Polarization: Vertical

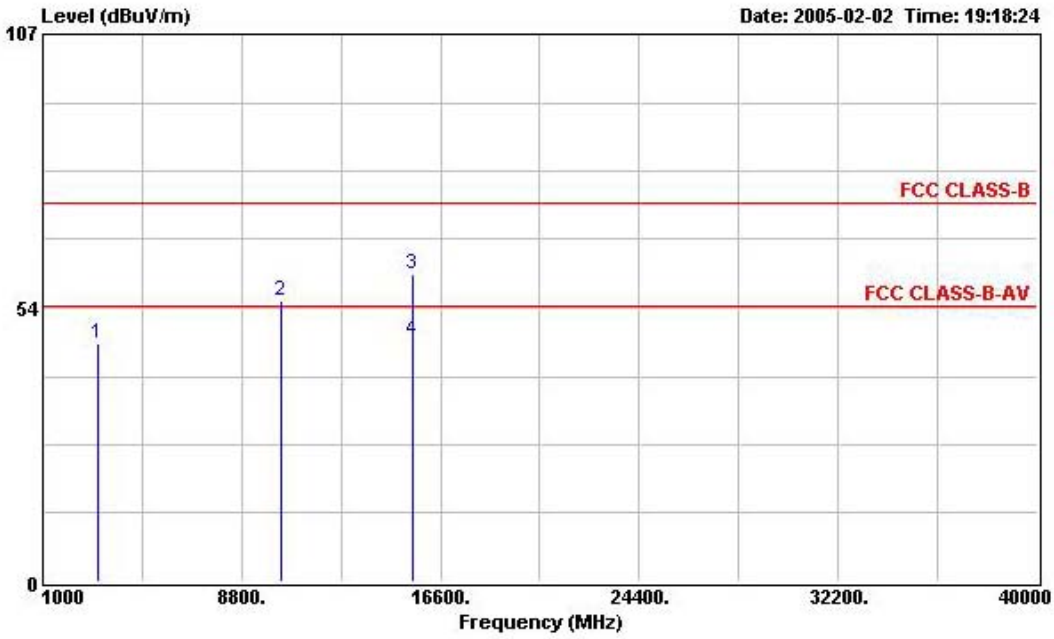


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3192.000	44.74	-29.26	74.00	51.24	30.48	2.26	39.24	Peak	---	---
2	10360.000	52.97	-21.03	74.00	48.42	38.90	4.27	38.62	Peak	---	---
3	15544.000	47.36	-6.64	54.00	42.40	37.77	5.18	37.99	Average	---	---
4	15544.000	59.37	-14.63	74.00	54.41	37.77	5.18	37.99	Peak	---	---

Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

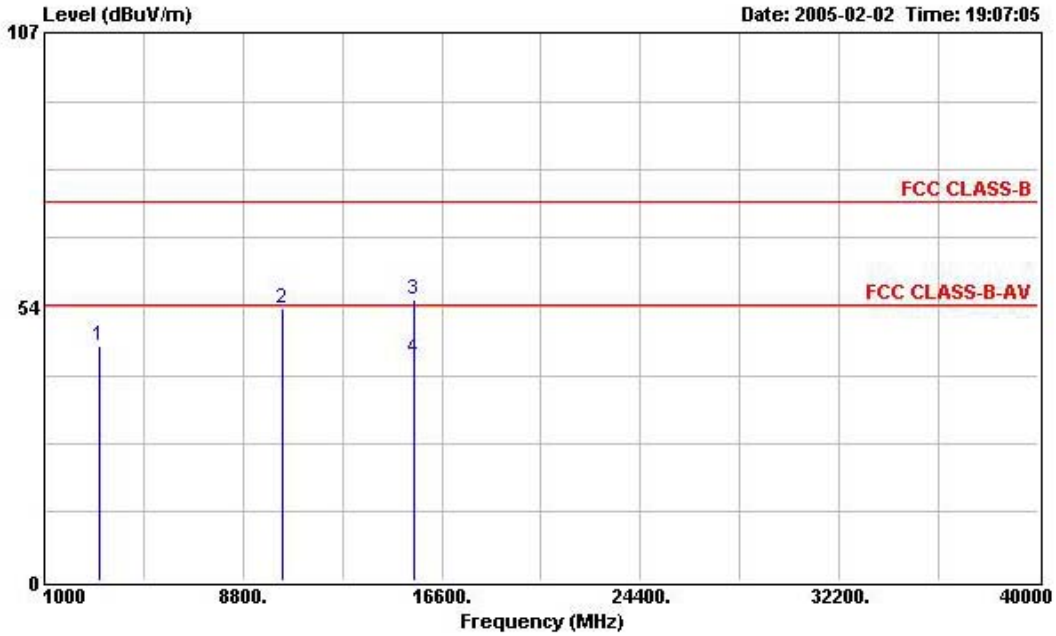
Mode 2

(A) Polarization: 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	3188.000	46.41	-27.59	74.00	52.91	30.48	2.26	39.24	Peak	---	---
2	10360.000	54.76	-19.24	74.00	50.21	38.90	4.27	38.62	Peak	---	---
3	15540.000	60.10	-13.90	74.00	55.14	37.77	5.18	37.99	Peak	---	---
4	15540.000	47.35	-6.65	54.00	42.39	37.77	5.18	37.99	Average	---	---

(B) Polarization: Vertical

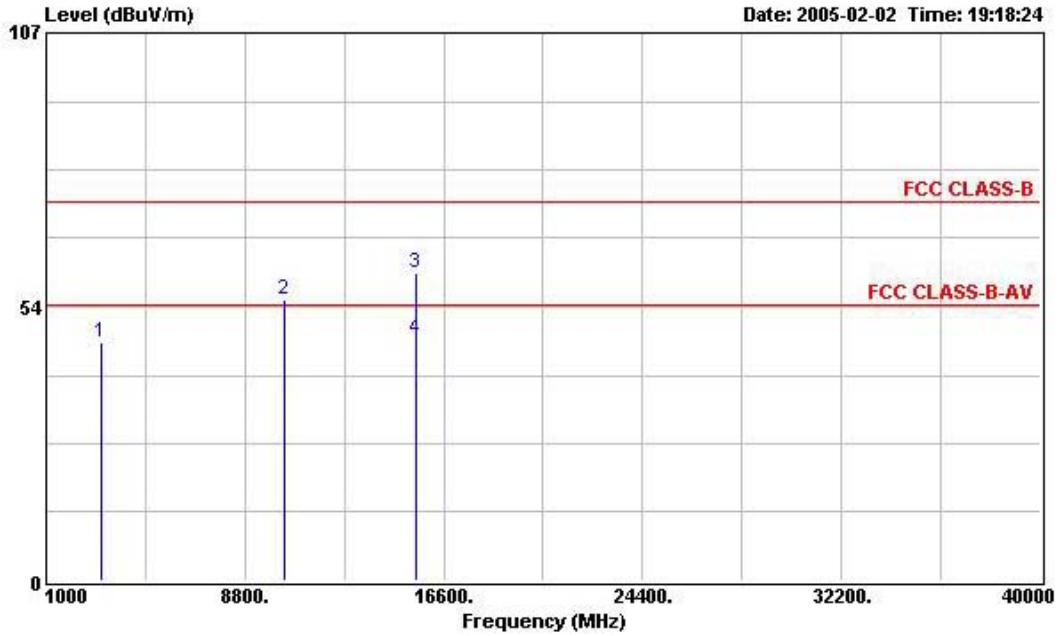


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3188.000	45.74	-28.26	74.00	52.24	30.48	2.26	39.24	Peak	---	---
2	10360.000	53.09	-20.91	74.00	48.54	38.90	4.27	38.62	Peak	---	---
3	15536.000	54.93	-19.07	74.00	49.97	37.77	5.18	37.99	Peak	---	---
4	15536.000	43.28	-10.72	54.00	38.32	37.77	5.18	37.99	Average	---	---

Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

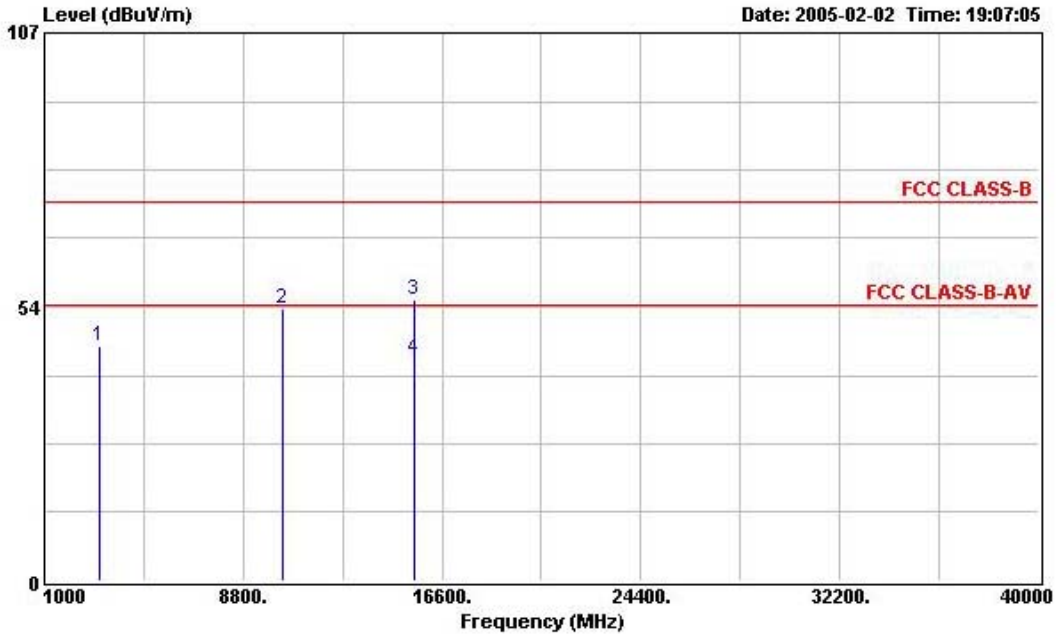
Mode 3

(A) Polarization: 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	3188.000	46.41	-27.59	74.00	52.91	30.48	2.26	39.24	Peak	---	---
2	10360.000	54.76	-19.24	74.00	50.21	38.90	4.27	38.62	Peak	---	---
3	15540.000	60.10	-13.90	74.00	55.14	37.77	5.18	37.99	Peak	---	---
4	15540.000	47.35	-6.65	54.00	42.39	37.77	5.18	37.99	Average	---	---

(B) Polarization: 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	3188.000	45.74	-28.26	74.00	52.24	30.48	2.26	39.24	Peak	---	---
2	10360.000	53.09	-20.91	74.00	48.54	38.90	4.27	38.62	Peak	---	---
3	15536.000	54.93	-19.07	74.00	49.97	37.77	5.18	37.99	Peak	---	---
4	15536.000	43.28	-10.72	54.00	38.32	37.77	5.18	37.99	Average	---	---

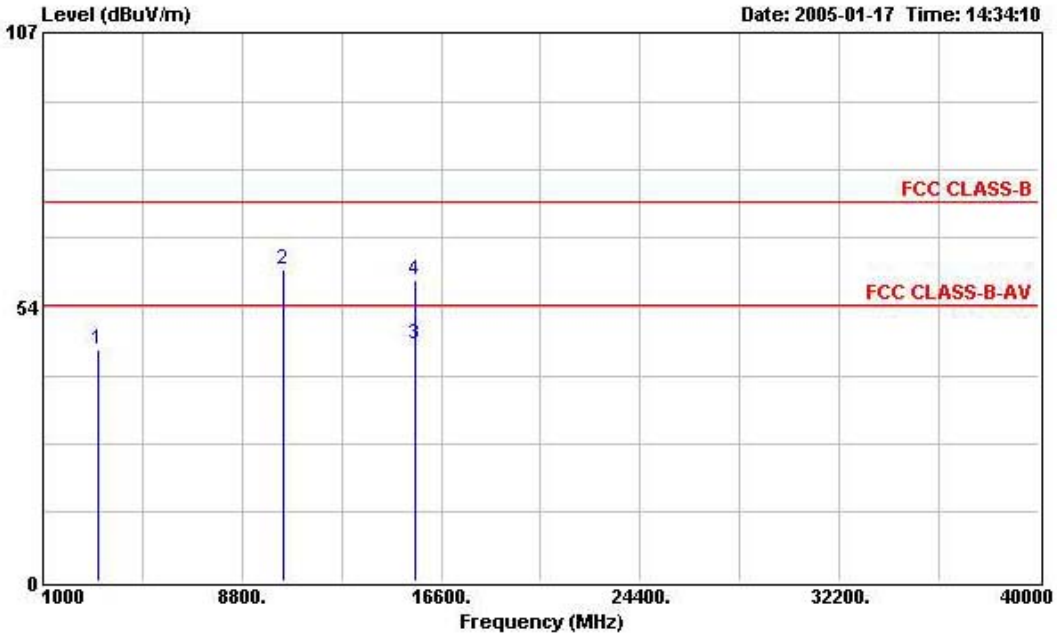
Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

5.8.6. Test Results for CH 40/ 5200 MHz (for emission above 1GHz)

- **Normal Mode**
- Temperature: 24°C
- Relative Humidity: 51%
- Duty Cycle of the Equipment During the Test: 100.00%
- Test Engineer: Ted Chiu

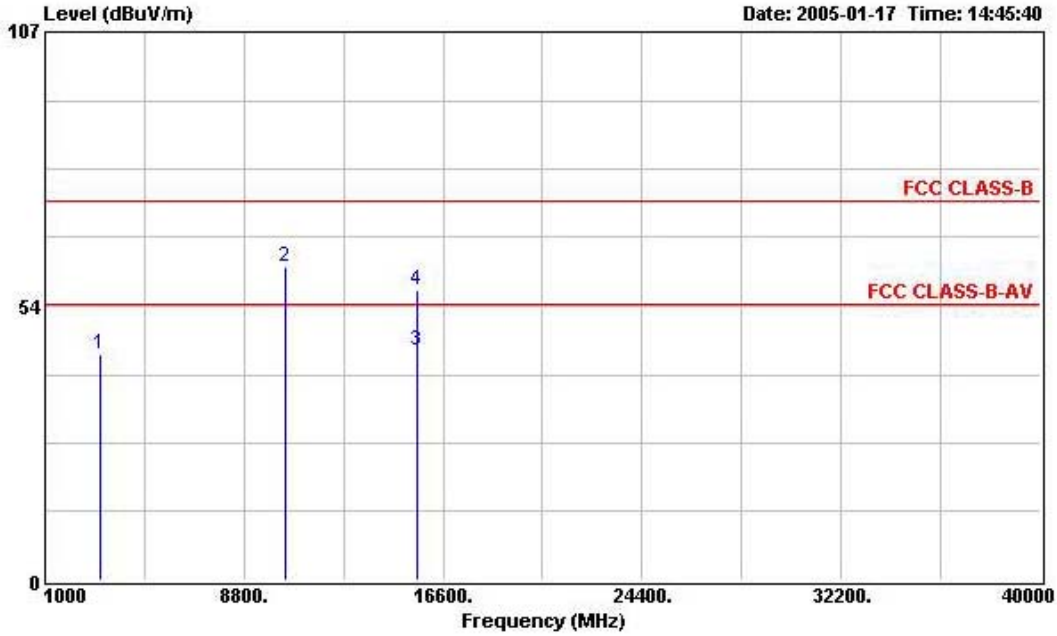
Mode 1

(A) Polarization: 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	3188.000	45.31	-28.69	74.00	51.81	30.48	2.26	39.24	Peak	---	---
2	10404.000	60.81	-13.19	74.00	56.22	38.90	4.31	38.62	Peak	---	---
3	15600.000	46.17	-7.83	54.00	41.25	37.69	5.18	37.95	Average	---	---
4	15600.000	58.76	-15.24	74.00	53.84	37.69	5.18	37.95	Peak	---	---

(B) Polarization: Vertical

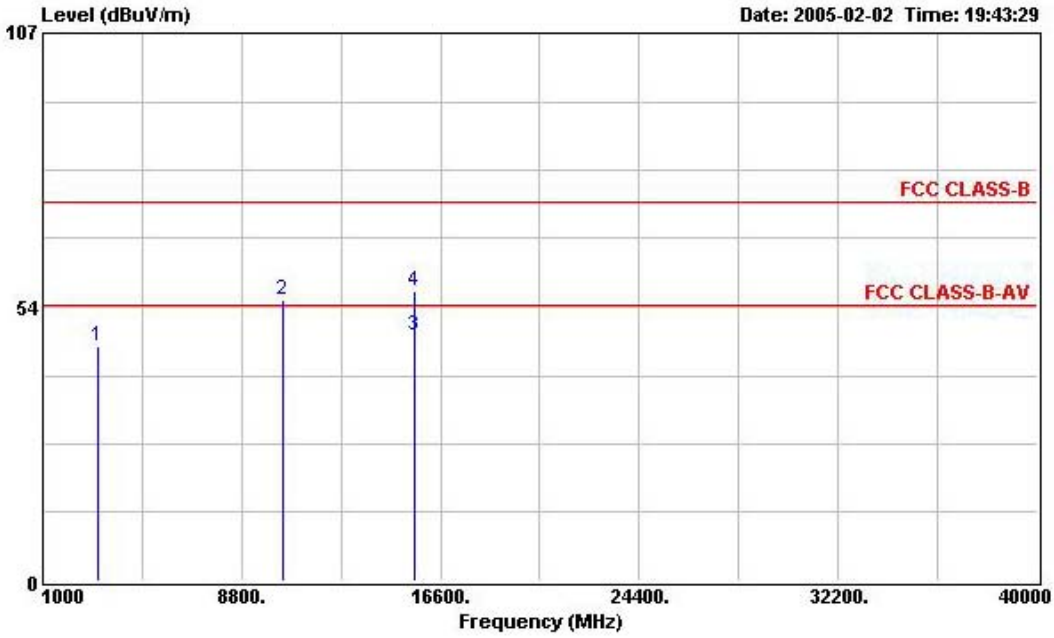


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3196.000	44.05	-29.95	74.00	50.55	30.48	2.26	39.24	Peak	---	---
2	10400.000	61.31	-12.69	74.00	56.72	38.90	4.31	38.62	Peak	---	---
3	15592.000	44.85	-9.15	54.00	39.93	37.69	5.18	37.95	Average	---	---
4	15592.000	56.62	-17.38	74.00	51.70	37.69	5.18	37.95	Peak	---	---

Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

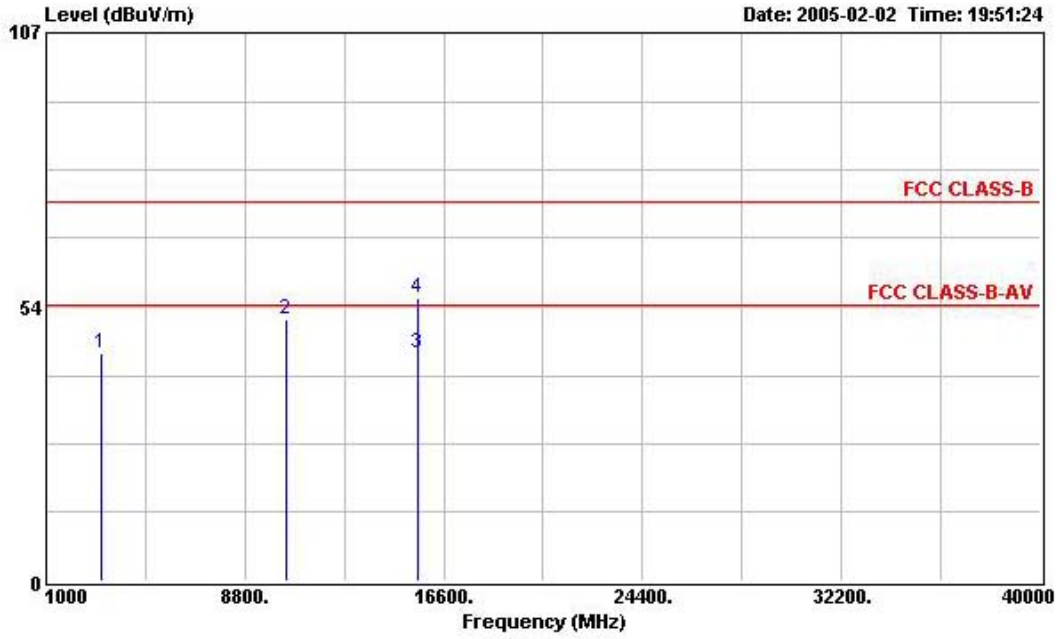
Mode 2

(A) Polarization: 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	3192.000	45.92	-28.08	74.00	52.42	30.48	2.26	39.24	Peak	---	---
2	10404.000	54.77	-19.23	74.00	50.18	38.90	4.31	38.62	Peak	---	---
3	15592.000	48.10	-5.90	54.00	43.18	37.69	5.18	37.95	Average	---	---
4	15592.000	56.67	-17.33	74.00	51.75	37.69	5.18	37.95	Peak	---	---

(B) Polarization: Vertical

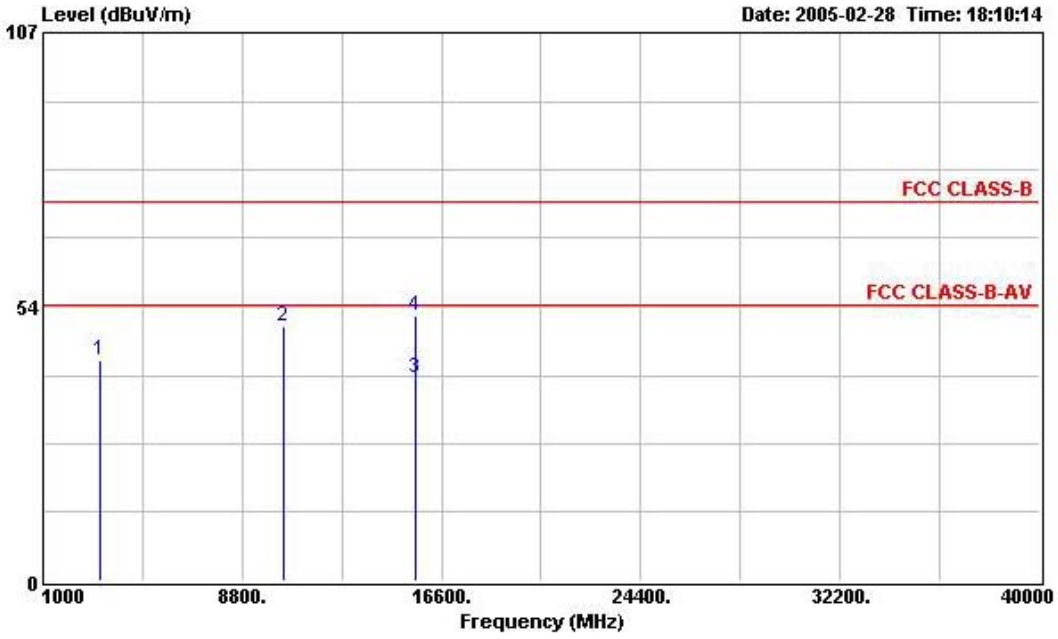


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3196.000	44.60	-29.40	74.00	51.10	30.48	2.26	39.24	Peak	---	---
2	10404.000	51.24	-22.76	74.00	46.65	38.90	4.31	38.62	Peak	---	---
3	15592.000	44.35	-9.65	54.00	39.43	37.69	5.18	37.95	Average	---	---
4	15592.000	55.29	-18.71	74.00	50.37	37.69	5.18	37.95	Peak	---	---

Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

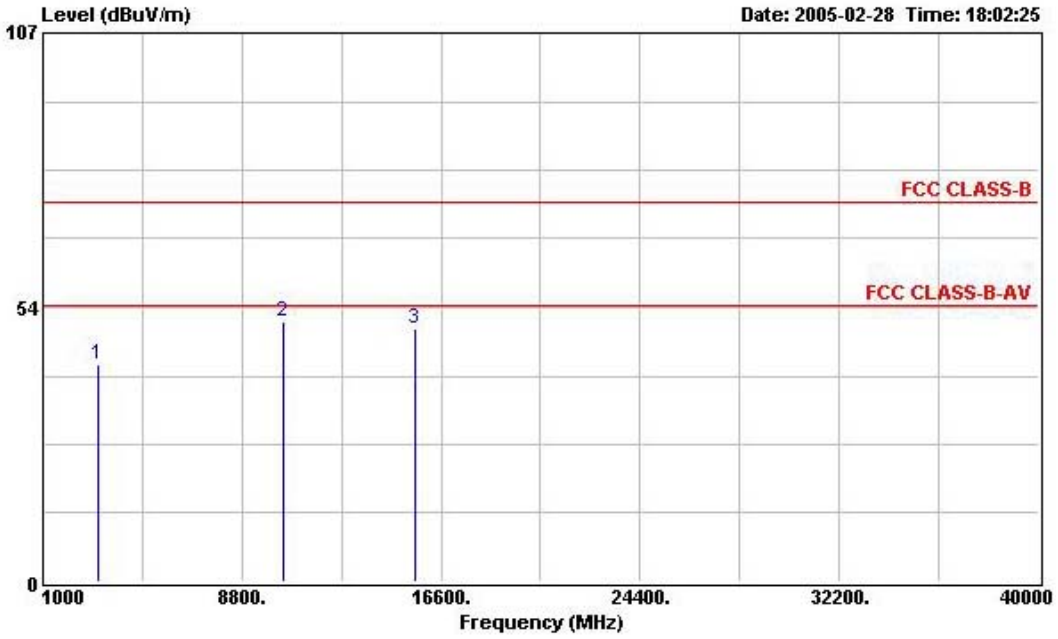
Mode 3

(A) Polarization: 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	3204.000	43.11	-30.89	74.00	49.44	30.59	2.27	39.19	Peak	---	---
2	10400.000	49.80	-24.20	74.00	45.21	38.90	4.31	38.62	Peak	---	---
3	15596.000	39.57	-14.43	54.00	34.65	37.69	5.18	37.95	Average	---	---
4	15596.000	51.92	-22.08	74.00	47.00	37.69	5.18	37.95	Peak	---	---

(B) Polarization: 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	3196.000	42.40	-31.60	74.00	48.90	30.48	2.26	39.24	Peak	---	---
2	10400.000	50.86	-23.14	74.00	46.27	38.90	4.31	38.62	Peak	---	---
3	15600.000	49.41	-24.59	74.00	44.49	37.69	5.18	37.95	Peak	---	---

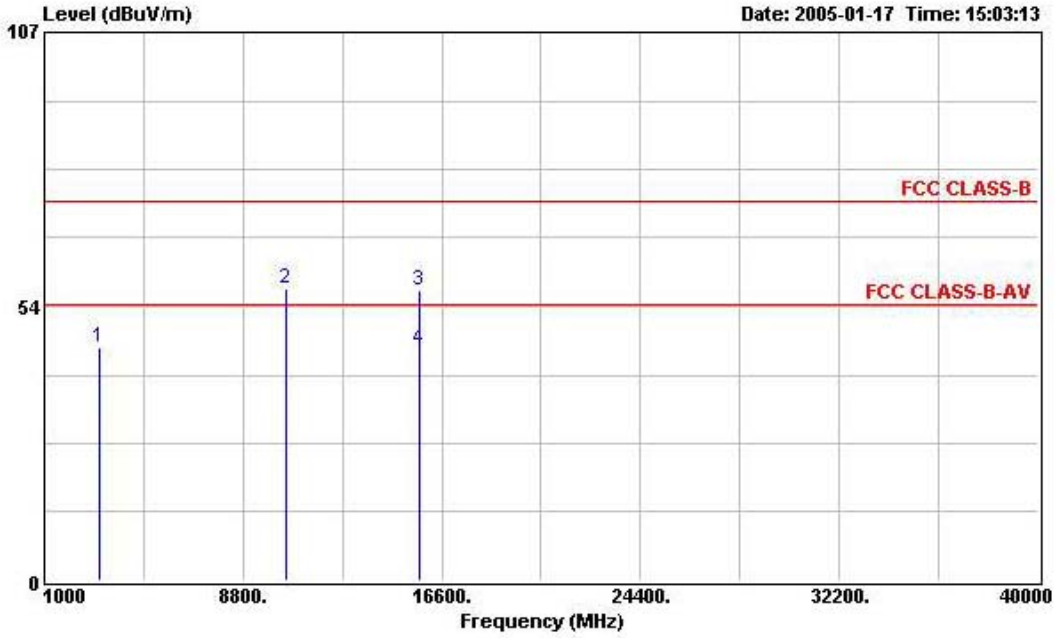
Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

5.8.7. Test Results for CH 48 / 5240 MHz (for emission above 1GHz)

- **Normal Mode**
- Temperature: 24°C
- Relative Humidity: 51%
- Duty Cycle of the Equipment During the Test: 100.00%
- Test Engineer: Ted Chiu

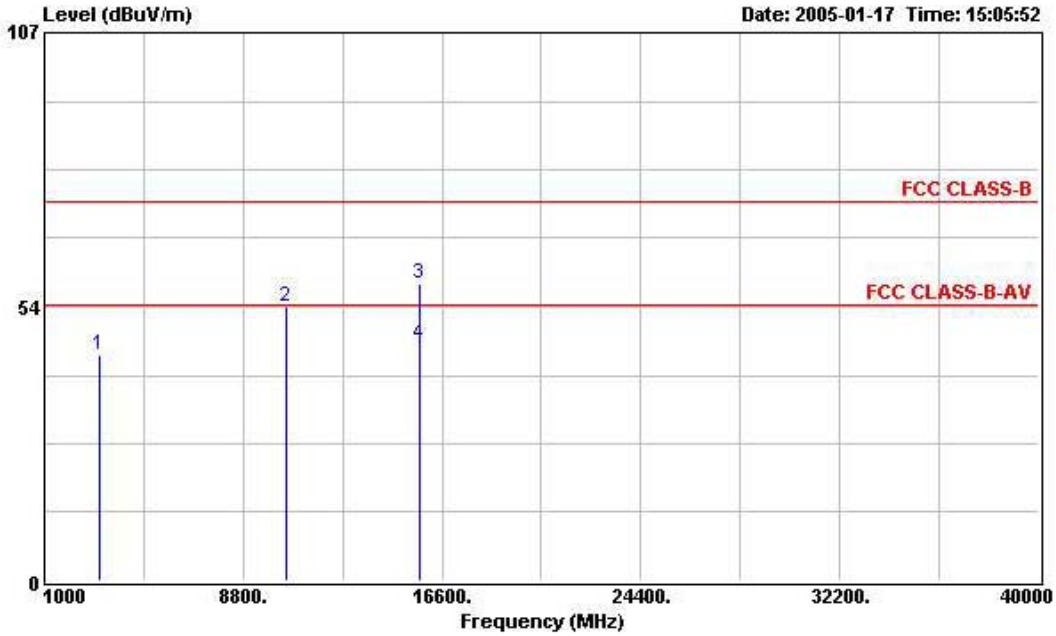
Mode 1

(A) Polarization: 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	3184.000	45.55	-28.45	74.00	52.05	30.48	2.26	39.24	Peak	---	---
2	10484.000	57.15	-16.85	74.00	52.50	38.90	4.37	38.62	Peak	---	---
3	15712.000	56.57	-17.43	74.00	51.74	37.50	5.18	37.85	Peak	---	---
4	15712.000	44.99	-9.01	54.00	40.16	37.50	5.18	37.85	Average	---	---

(B) Polarization: Vertical

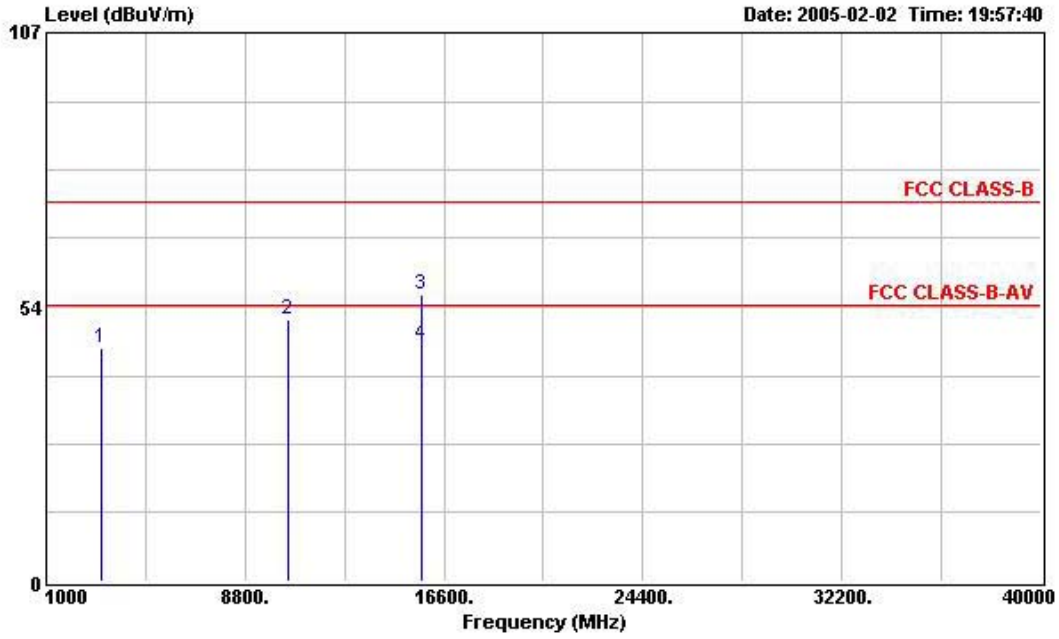


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3188.000	44.07	-29.93	74.00	50.57	30.48	2.26	39.24	Peak	---	---
2	10488.000	53.52	-20.48	74.00	48.87	38.90	4.37	38.62	Peak	---	---
3	15716.000	57.86	-16.14	74.00	53.03	37.50	5.18	37.85	Peak	---	---
4	15716.000	46.14	-7.86	54.00	41.31	37.50	5.18	37.85	Average	---	---

Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

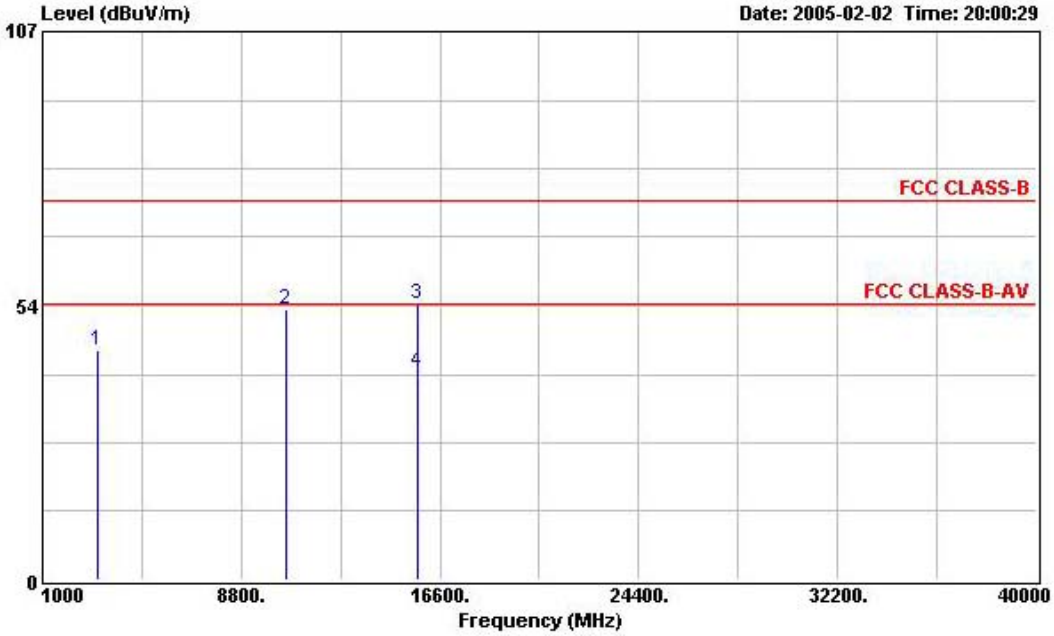
Mode 2

(A) Polarization: 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	3192.000	45.40	-28.60	74.00	51.90	30.48	2.26	39.24	Peak	---	---
2	10480.000	51.03	-22.97	74.00	46.38	38.90	4.37	38.62	Peak	---	---
3	15716.000	55.96	-18.04	74.00	51.13	37.50	5.18	37.85	Peak	---	---
4	15716.000	46.09	-7.91	54.00	41.26	37.50	5.18	37.85	Average	---	---

(B) Polarization: Vertical

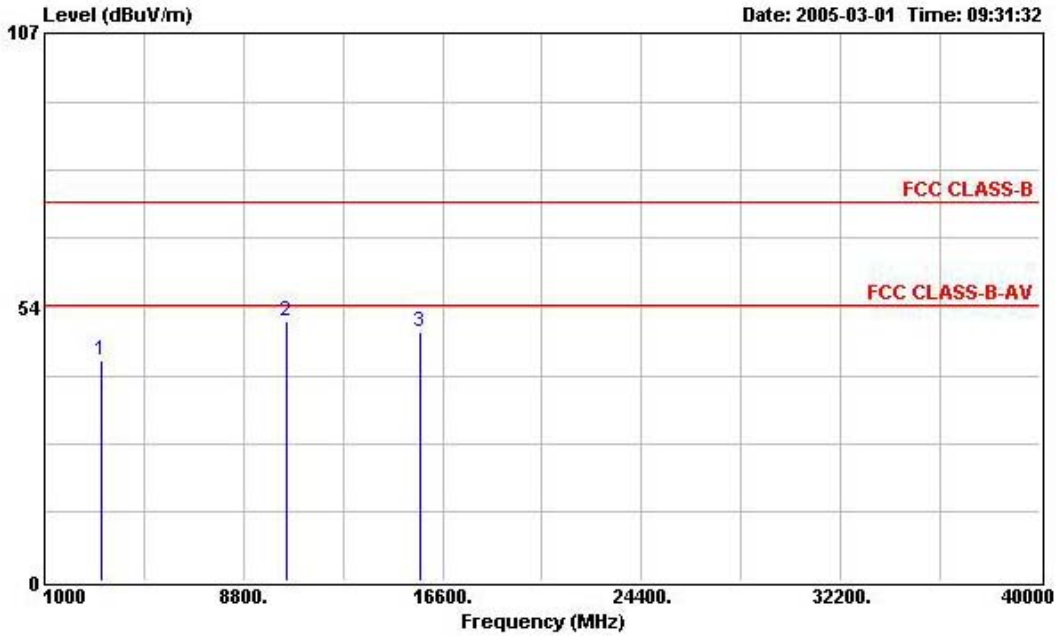


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3192.000	44.86	-29.14	74.00	51.36	30.48	2.26	39.24	Peak	---	---
2	10528.000	52.68	-21.32	74.00	47.99	38.90	4.41	38.62	Peak	---	---
3	15724.000	53.94	-20.06	74.00	49.14	37.44	5.18	37.82	Peak	---	---
4	15724.000	40.69	-13.31	54.00	35.89	37.44	5.18	37.82	Average	---	---

Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

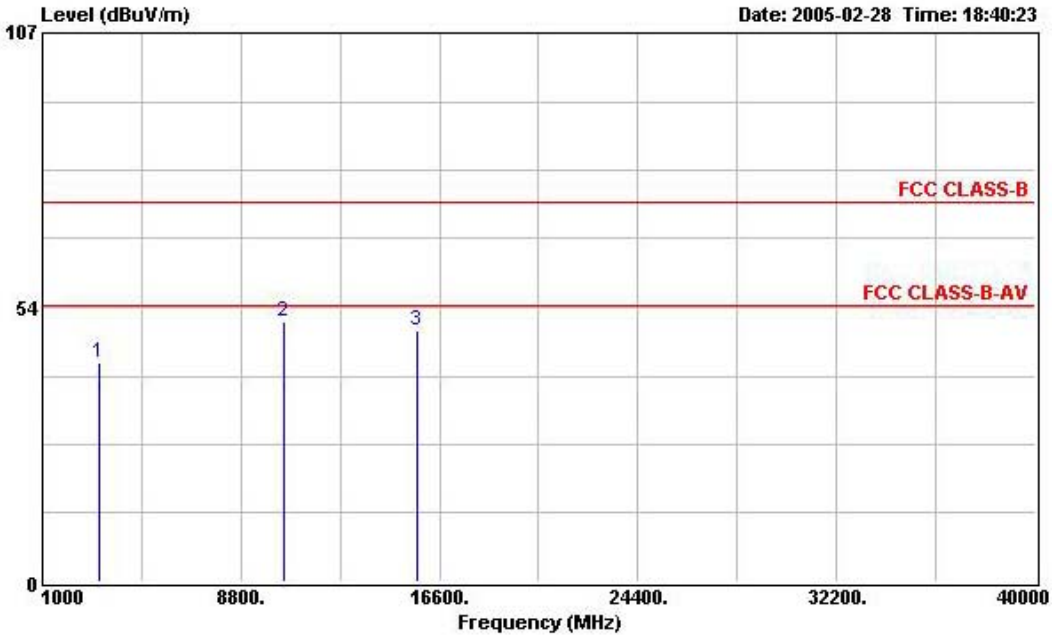
Mode 3

(A) Polarization: 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	3204.000	43.17	-30.83	74.00	49.50	30.59	2.27	39.19	Peak	---	---
2	10480.000	50.59	-23.41	74.00	45.94	38.90	4.37	38.62	Peak	---	---
3	15720.000	48.76	-25.24	74.00	43.93	37.50	5.18	37.85	Peak	---	---

(B) Polarization: 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	3208.000	42.86	-31.14	74.00	49.19	30.59	2.27	39.19	Peak	---	---
2	10480.000	50.83	-23.17	74.00	46.18	38.90	4.37	38.62	Peak	---	---
3	15720.000	49.01	-24.99	74.00	44.18	37.50	5.18	37.85	Peak	---	---

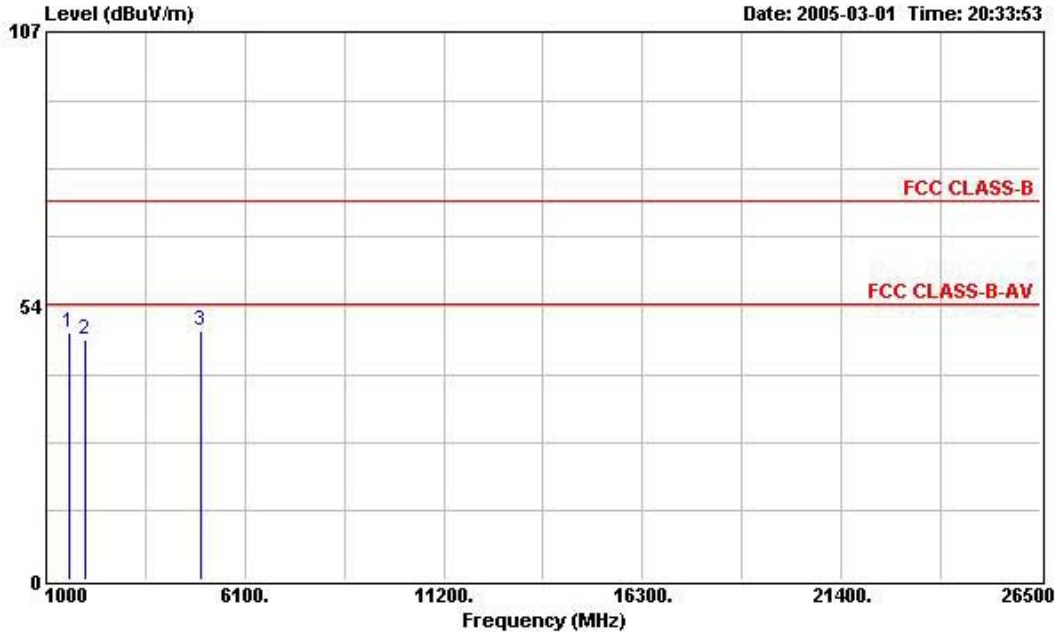
Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

5.8.8. Test Results for CH 52 / 5260 MHz (for emission above 1GHz)

- **Normal Mode**
- Temperature: 24°C
- Relative Humidity: 51%
- Duty Cycle of the Equipment During the Test: 100.00%
- Test Engineer: Ted Chiu

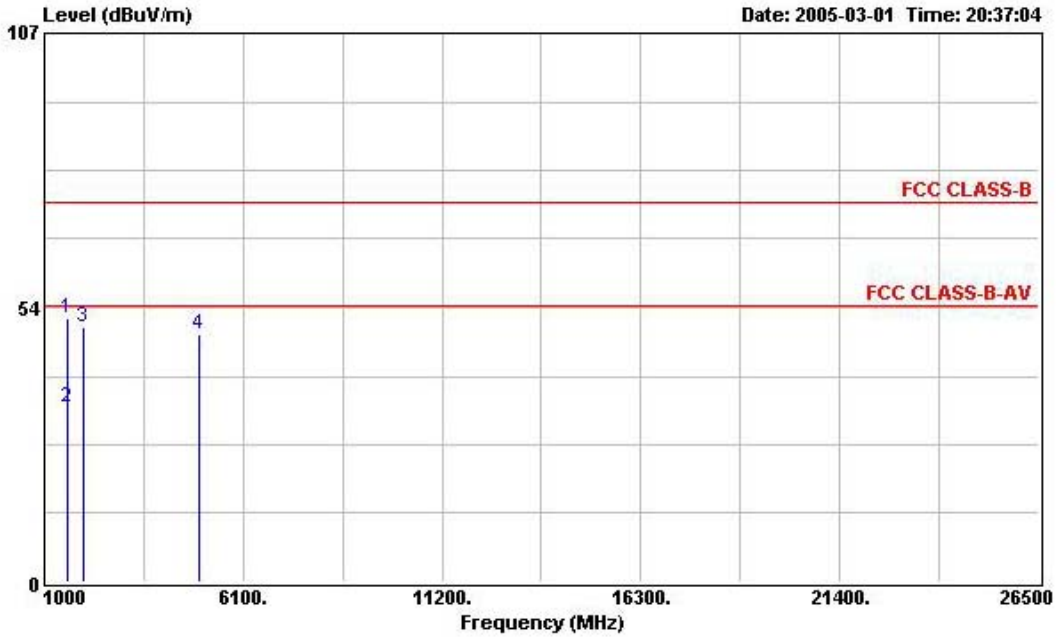
Mode 1

(A) Polarization: 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	1596.000	48.43	-25.57	74.00	60.59	25.60	1.52	39.28	Peak	---	---
2	1998.000	46.82	-27.18	74.00	57.35	27.40	1.72	39.65	Peak	---	---
3	4988.000	48.80	-25.20	74.00	52.77	33.27	2.91	40.15	Peak	100	360

(B) Polarization: Vertical

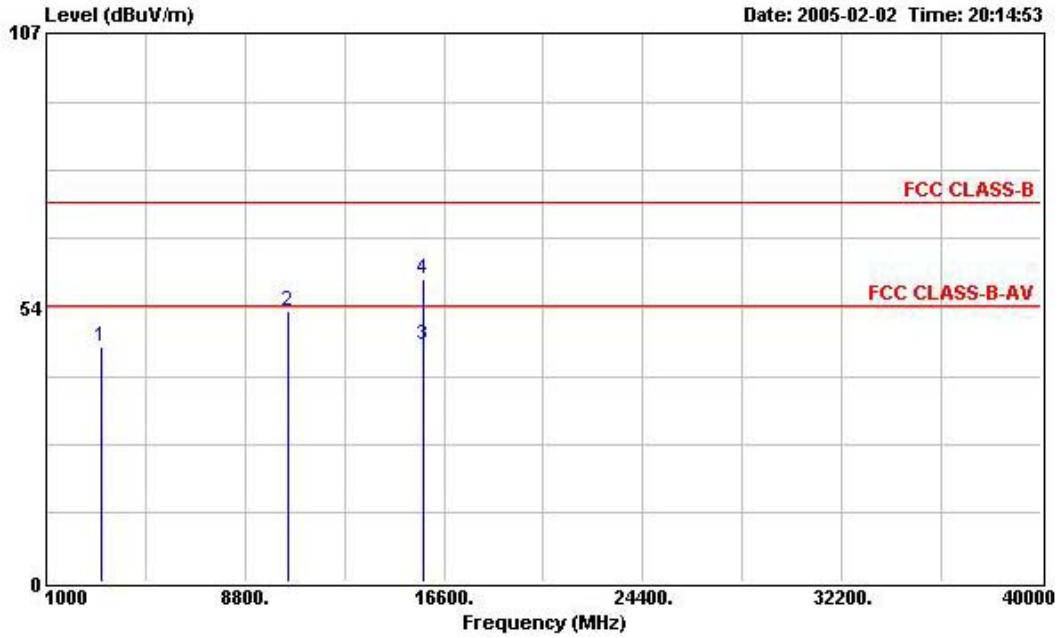


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	1596.000	51.32	-22.68	74.00	63.48	25.60	1.52	39.28	Peak	---	---
2	1596.000	34.07	-19.93	54.00	46.23	25.60	1.52	39.28	Average	---	---
3	2004.000	49.62	-24.38	74.00	60.12	27.42	1.73	39.65	Peak	---	---
4	4988.000	48.26	-25.74	74.00	52.23	33.27	2.91	40.15	Peak	100	0

Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

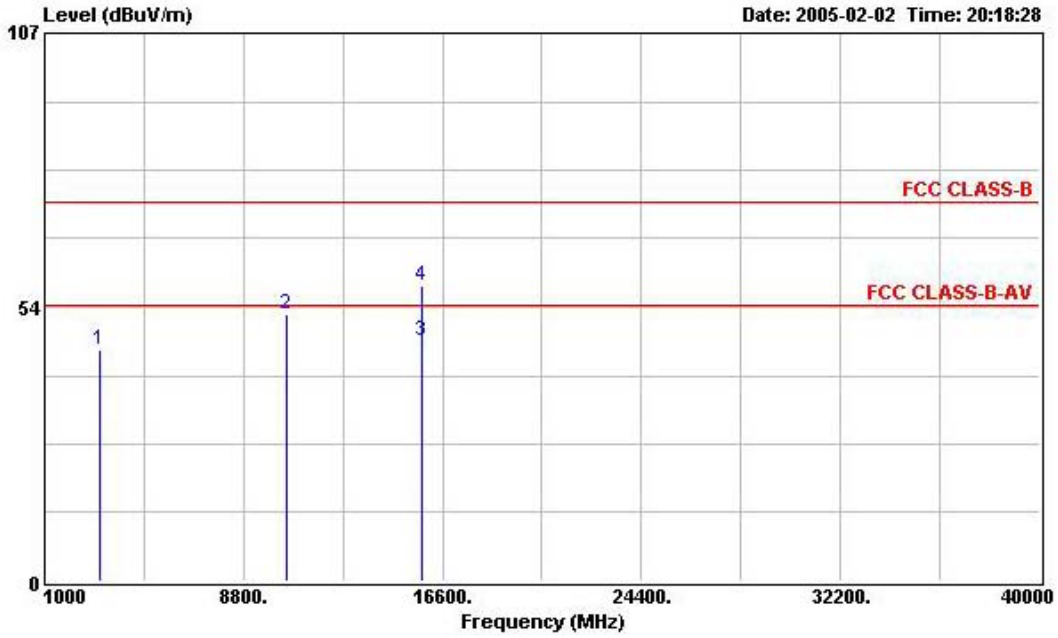
Mode 2

(A) Polarization: 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	3193.500	45.73	-28.27	74.00	52.23	30.48	2.26	39.24	Peak	---	---
2	10520.000	52.84	-21.16	74.00	48.15	38.90	4.41	38.62	Peak	---	---
3	15776.000	46.13	-7.87	54.00	41.37	37.39	5.17	37.80	Average	---	---
4	15776.000	59.01	-14.99	74.00	54.25	37.39	5.17	37.80	Peak	---	---

(B) Polarization: Vertical

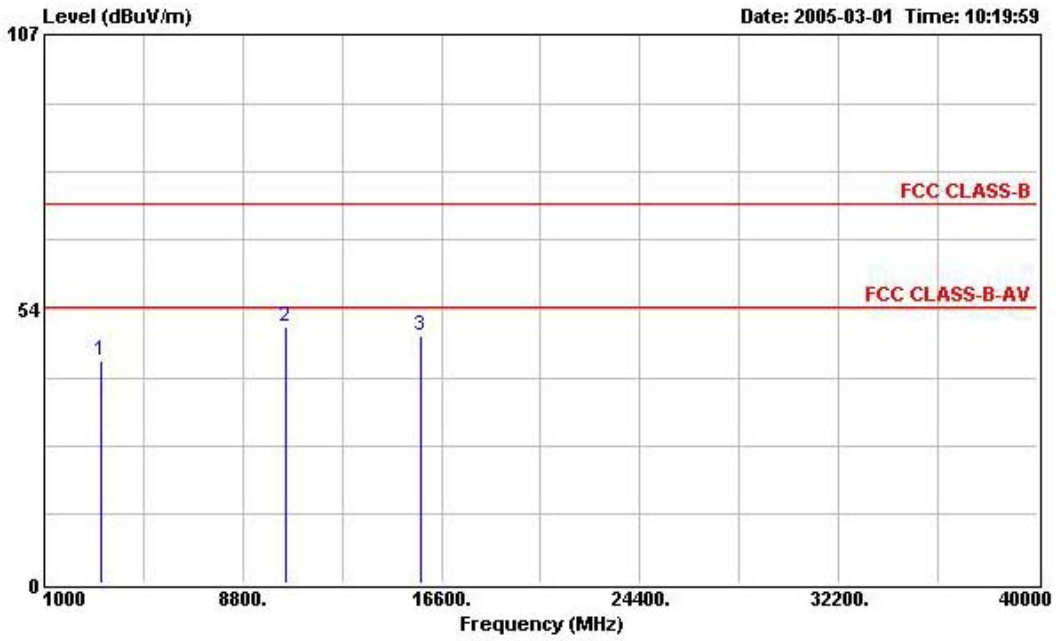


	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	3184.900	45.27	-28.73	74.00	51.77	30.48	2.26	39.24	Peak	---	---
2	10520.000	52.18	-21.82	74.00	47.49	38.90	4.41	38.62	Peak	---	---
3	15772.000	46.94	-7.06	54.00	42.18	37.39	5.17	37.80	Average	---	---
4	15772.000	57.79	-16.21	74.00	53.03	37.39	5.17	37.80	Peak	---	---

Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

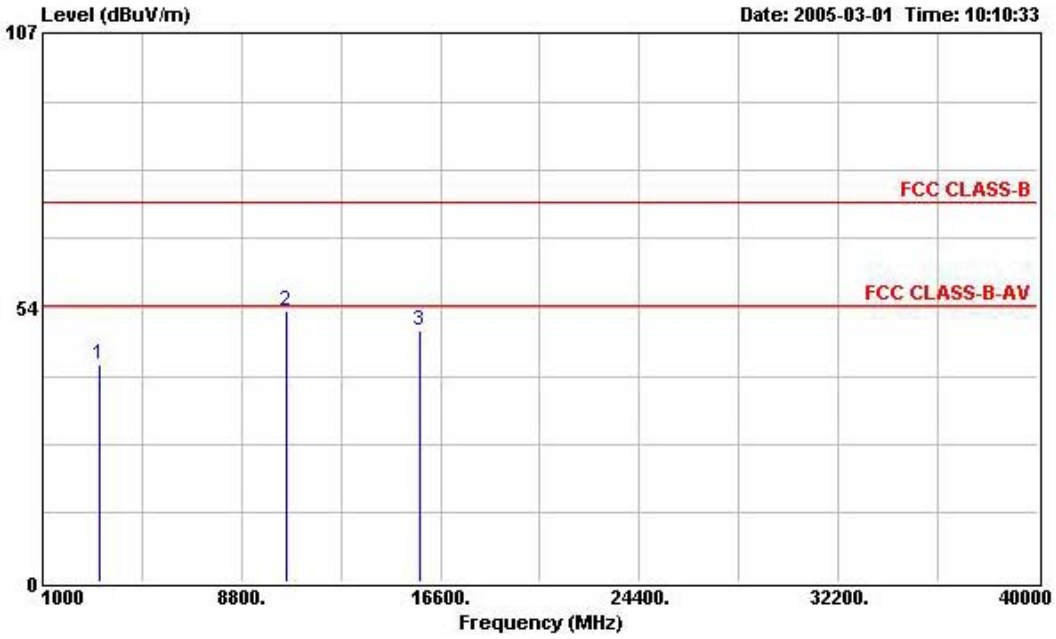
Mode 3

(A) Polarization: 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	3200.000	43.38	-30.62	74.00	49.88	30.48	2.26	39.24	Peak	---	---
2	10520.000	50.10	-23.90	74.00	45.41	38.90	4.41	38.62	Peak	---	---
3	15780.000	48.37	-25.63	74.00	43.61	37.39	5.17	37.80	Peak	---	---

(B) Polarization: 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	3204.000	42.44	-31.56	74.00	48.77	30.59	2.27	39.19	Peak	---	---
2	10536.000	52.69	-21.31	74.00	47.98	38.88	4.44	38.61	Peak	---	---
3	15780.000	49.08	-24.92	74.00	44.32	37.39	5.17	37.80	Peak	---	---

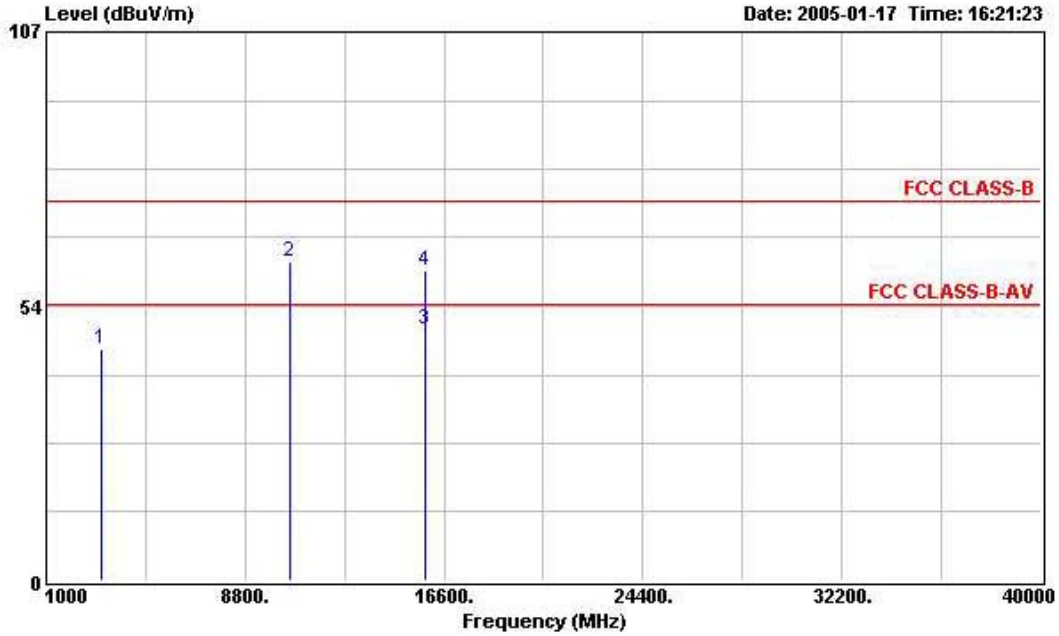
Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

5.8.9. Test Results for CH 56 / 5280 MHz (for emission above 1GHz)

- **Normal Mode**
- Temperature: 24°C
- Relative Humidity: 51%
- Duty Cycle of the Equipment During the Test: 100.00%
- Test Engineer: Ted Chiu

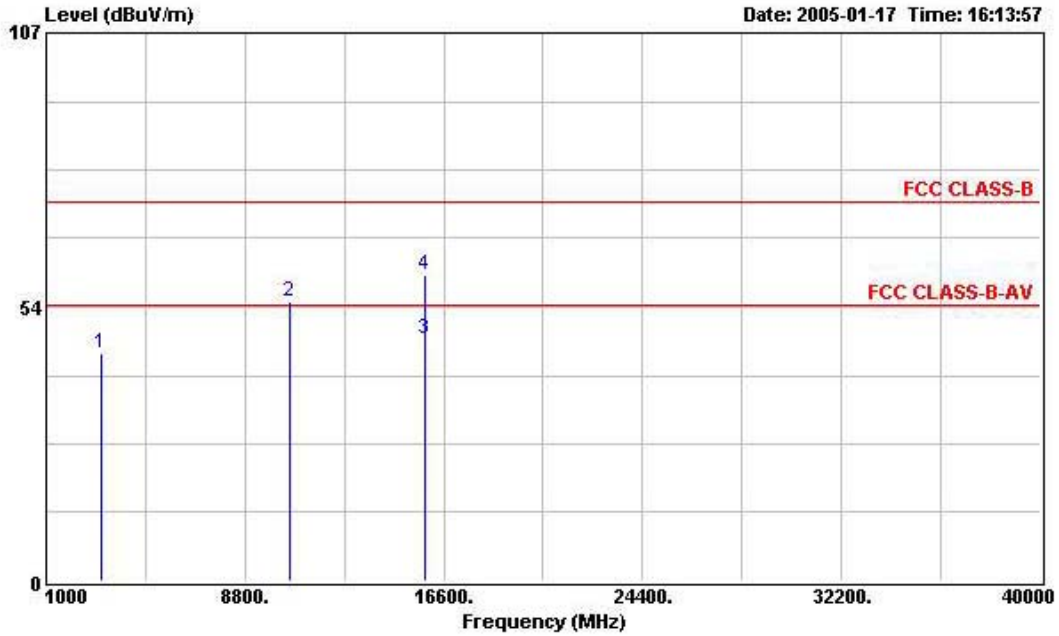
Mode 1

(A) Polarization: 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	3192.000	45.21	-28.79	74.00	51.71	30.48	2.26	39.24	Peak	---	---
2	10560.000	62.03	-11.97	74.00	57.32	38.88	4.44	38.61	Peak	---	---
3	15836.000	49.06	-4.94	54.00	44.32	37.33	5.17	37.76	Average	---	---
4	15836.000	60.33	-13.67	74.00	55.59	37.33	5.17	37.76	Peak	---	---

(B) Polarization: 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	3188.000	44.31	-29.69	74.00	50.81	30.48	2.26	39.24	Peak	---	---
2	10560.000	54.46	-19.54	74.00	49.75	38.88	4.44	38.61	Peak	---	---
3	15844.000	47.28	-6.72	54.00	42.58	37.25	5.17	37.72	Average	---	---
4	15844.000	59.90	-14.10	74.00	55.20	37.25	5.17	37.72	Peak	---	---

Note:
Emission level (dBuV/m) = 20 log Emission level (uV/m)
Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level