FCC Test Report

Product Name	：	VDSL2 Security Firewall
Model No.	：	Vigor2860, Other models please refer to the report attachment 1
FCC ID.	：	VGYV2860VNPLUS

Applicant	：	DrayTek Corp.
Address	：	No.26 Fu Shing Rd., HuKou County,Hsin-Chu Industrial Park,Hsin-Chu,Taiwan 303 R.O.C

Date of Receipt	：	2013/03/27
Issued Date	：	2013/11/29
Report No.	：	134094R-RFUSP42V01
Report Version	：	V1.0

Testing Laboratory
1313

Test Report Certification

Issued Date : 2013/11/29
Report No. : 134094R-RFUSP42V01

QuieTek

Product Name	:	VDSL2 Security Firewall
Applicant	:	DrayTek Corp.
Address	:	No.26 Fu Shing Rd., HuKou County,Hsin-Chu Industrial Park,Hsin-Chu,Taiwan 303 R.O.C
Manufacturer	:	DrayTek Corp.
Model No.	:	Vigor2860, Other models please refer to the report attachment 1
FCC ID.	:	VGYV2860VNPLUS
EUT Voltage	:	AC 100-240V, 50-60Hz
Trade Name	:	DrayTek
Applicable Standard	:	FCC CFR Title 47 Part 15 Subpart C Section 15.247:2012 ANSI C63.4: 2009
Test Result	:	Complied

The test results relate only to the samples tested.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

Documented By : Carol Tsai

(Carol Tsai / Adm. Specialist)

Tested By : JuBo Shen

(JuBo Shen / Engineer)

Approved By : Roy Wang

(Roy Wang / Director)

Laboratory Information

We, **QuieTek Corporation**, are an independent RF consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025 specified testing scopes:

Taiwan R.O.C.	**:**	**TAF, Accreditation Number: 1313**
USA	**:**	**FCC, Registration Number: 365520**
Canada	**:**	**IC, Submission No: 150981**

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site:http://www.quietek.com/tw/ctg/cts/accreditations.htm
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

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TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

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1. General Information

1.1. EUT Description

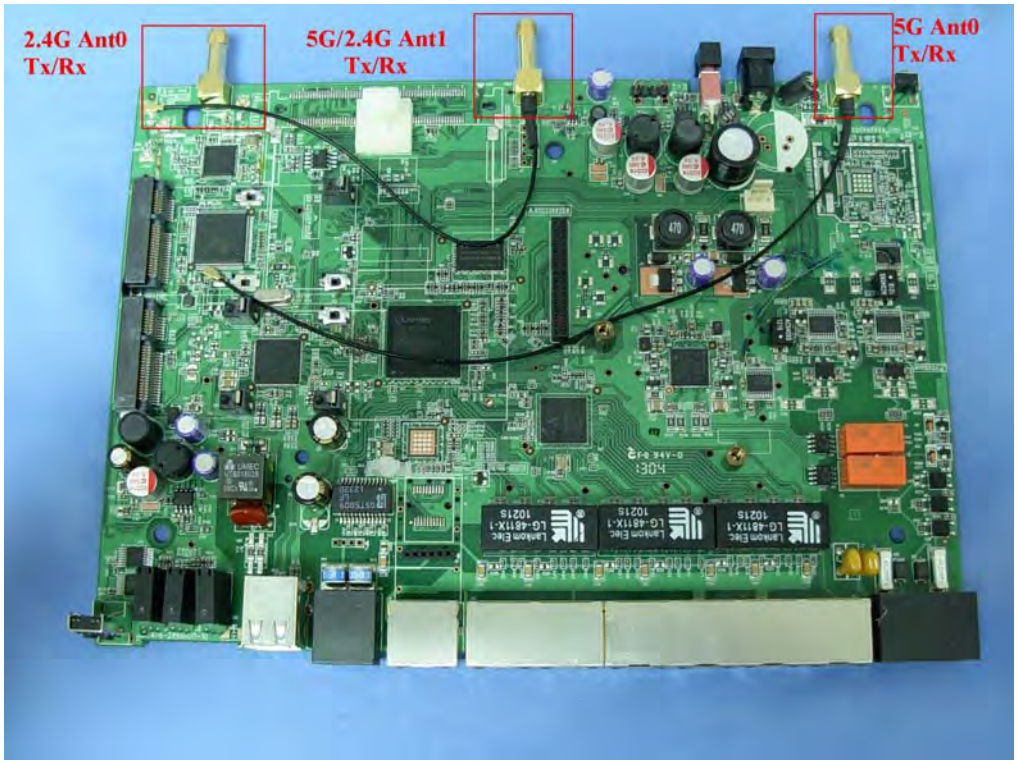
Product Name	VDSL2 Security Firewall	
Product Type	WLAN(2TX,2RX)	
Trade Name	DrayTek	
Model No.	Vigor2860, Other models please refer to the report attachment 1	
Frequency Range/ Channel Number	IEEE 802.11b/g/ IEEE 802.11n (20MHz)_2.4GHz	2412~2462MHz / 11 Channels
	IEEE 802.11n (40MHz)_2.4GHz	2422~2452MHz / 7 Channels
	IEEE 802.11a/ IEEE 802.11n (20MHz)_5.8GHz	5745~5825MHz / 5Channels
	IEEE 802.11n (40MHz)_5.8GHz	5755~5795MHz / 2 Channels
Type of Modulation	IEEE 802.11b	Direct Sequence Spread Spectrum
	IEEE 802.11a/g/n	Orthogonal Frequency Division Multiplexing
Data Speed	IEEE 802.11b	1, 2, 5.5, 11Mbps
	IEEE 802.11a/g	6, 9, 18, 24, 36, 48,54Mbps
	IEEE 802.11n	Support a subset of the combination of GI, MCS 0~MCS 15 and bandwidth defined in 802.11n
Antenna Gain	2.4G: Ant0: 1.95dBi, Ant1: 1.95dBi 5.8G: Ant0:4.12dBi, Ant1:4.12dBi	
Antenna Type	Dipole Antenna	

Component	
Antenna	MAG. LAYERS, EDA-1313-25GR2-A2, 3 Pcs
LAN Cable	Non-Shielded, 3m
DSL Cable (2 to 1)	Non-Shielded, 0.13m
Analog Cable (2 to 1)	Non-Shielded, 0.15m
Power Adatper	Powertron Electronics, PA1030-2I I/P : 100-240V~50/60Hz 0.8A O/P : 12V⎓2.5A, 30W Max Cable Out: Non-Shielded, 1.5m
Power Adatper	HON-KW ANG, HK-AX-120A200-US I/P : 100-240V~50/60Hz 0.8A O/P : 12V⎓2.0A Cable Out: Non-Shielded, 1.85m

ANT-TX / RX & Bandwidth

ANT-TX / RX	TX		RX	
Mode/ Channel Bandwidth	20MHz	40MHz	20MHz	40MHz
IEEE802.11a	✓		✓	
IEEE802.11b	✓		✓	
IEEE802.11g	✓		✓	
IEEE802.11n	✓	✓	✓	✓

2TX / 2RX



IEEE 802.11n

MCS Index	Modulation	R	N_{BPSCS}	N_{CBPS}		N_{DBPS}		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI	
								20MHz	40MHz	20MHz	40MHz
0	BPSK	1/2	1	52	108	26	54	6.5	13.5	7.2	15.0
1	QPSK	1/2	2	104	216	52	108	13.0	27.0	14.4	30.0
2	QPSK	3/4	2	104	216	78	162	19.5	40.5	21.7	45.0
3	16-QAM	1/2	4	208	432	104	216	26.0	54.0	28.9	60.0
4	16-QAM	3/4	4	208	432	156	324	39.0	81.0	43.3	90.0
5	64-QAM	2/3	6	312	648	208	432	52.0	108.0	57.8	120.0
6	64-QAM	3/4	6	312	648	234	486	58.5	121.5	65.0	135.0
7	64-QAM	5/6	6	312	648	260	540	65.0	135.0	72.2	150.0
Note 1: Support of 400ns GI is optional on transmit and receive.											

Table 1 – MCS parameters for TX Antenna number = 1

MCS Index	Modulation	R	N_{BPSCS}	N_{CBPS}		N_{DBPS}		Data Rate(Mb/s)			
				20MHz	40MHz	20MHz	40MHz	800ns GI		400ns GI	
								20MHz	40MHz	20MHz	40MHz
8	BPSK	1/2	1	104	216	52	108	13.0	27.0	14.4	30.0
9	QPSK	1/2	2	208	432	104	216	26.0	54.0	28.9	60.0
10	QPSK	3/4	2	208	432	156	324	39.0	81.0	43.3	90.0
11	16-QAM	1/2	4	416	864	208	432	52.0	108.0	57.8	120.0
12	16-QAM	3/4	4	416	864	312	648	78.0	162.0	86.7	180.0
13	64-QAM	2/3	6	624	1296	416	864	104.0	216.0	115.6	240.0
14	64-QAM	3/4	6	624	1296	468	972	117.0	243.0	130.0	270.0
15	64-QAM	5/6	6	624	1296	520	1080	130.0	270.0	144.4	300.0
Note 1: Support of 400ns GI is optional on transmit and receive.											

Table 2 – MCS parameters for TX Antenna number = 2

Symbol	Explanation
R	Code rate
N_{BPSC}	Number of coded bits per single carrier
N_{CBPS}	Number of coded bits per symbol
N_{DBPS}	Number of data bits per symbol
GI	guard interval

IEEE 802.11b/g & IEEE 802.11n (20MHz) - 2.4GHz

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
001	2412 MHz	002	2417 MHz	003	2422 MHz	004	2427 MHz
005	2432 MHz	006	2437 MHz	007	2442 MHz	008	2447 MHz
009	2452 MHz	010	2457 MHz	011	2462 MHz		

IEEE 802.11n (40MHz) - 2.4GHz

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
003	2422 MHz	004	2427 MHz	005	2432 MHz	006	2437 MHz
007	2442 MHz	008	2447 MHz	009	2452 MHz		

IEEE 802.11a & IEEE 802.11n (20MHz) - 5.8GHz

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
149	5745 MHz	153	5765 MHz	157	5785 MHz	161	5805 MHz
165	5825 MHz						

IEEE 802.11n (40MHz) - 5.8GHz

Working Frequency of Each Channel			
Channel	Frequency	Channel	Frequency
151	5755 MHz	159	5795 MHz

Note:

1. This device is a VDSL2 Security Firewall including 2.4GHz b/g/n and 5GHz a/n (2x2) transmitting and receiving function.
2. The variation of model number is for shown as attached 1.
3. These test results on a sample of the device are for the purpose of demonstrating Compliance with Part 15 Subpart C Paragraph 15.247.
4. Regards to the frequency band operation; the lowest、middle and highest frequency of channel were selected to perform the test, and then shown on this report.
5. This device is a composite device in accordance with Part 15 regulations. The receiving function receiving was tested and its test report number is 134094R-RFUSP37V02 under Declaration of Conformity.

1.3. Test Mode

QuieTek has verified the construction and function in typical operation. The preliminary tests were performed in different data rate, and to find the worst condition, which was shown in this test report. The following table is the final test mode.

TX	Mode 1: Transmit (Adapter: PA1030-21) Mode 2: Transmit (Adapter: HK-AX-120A200-US)

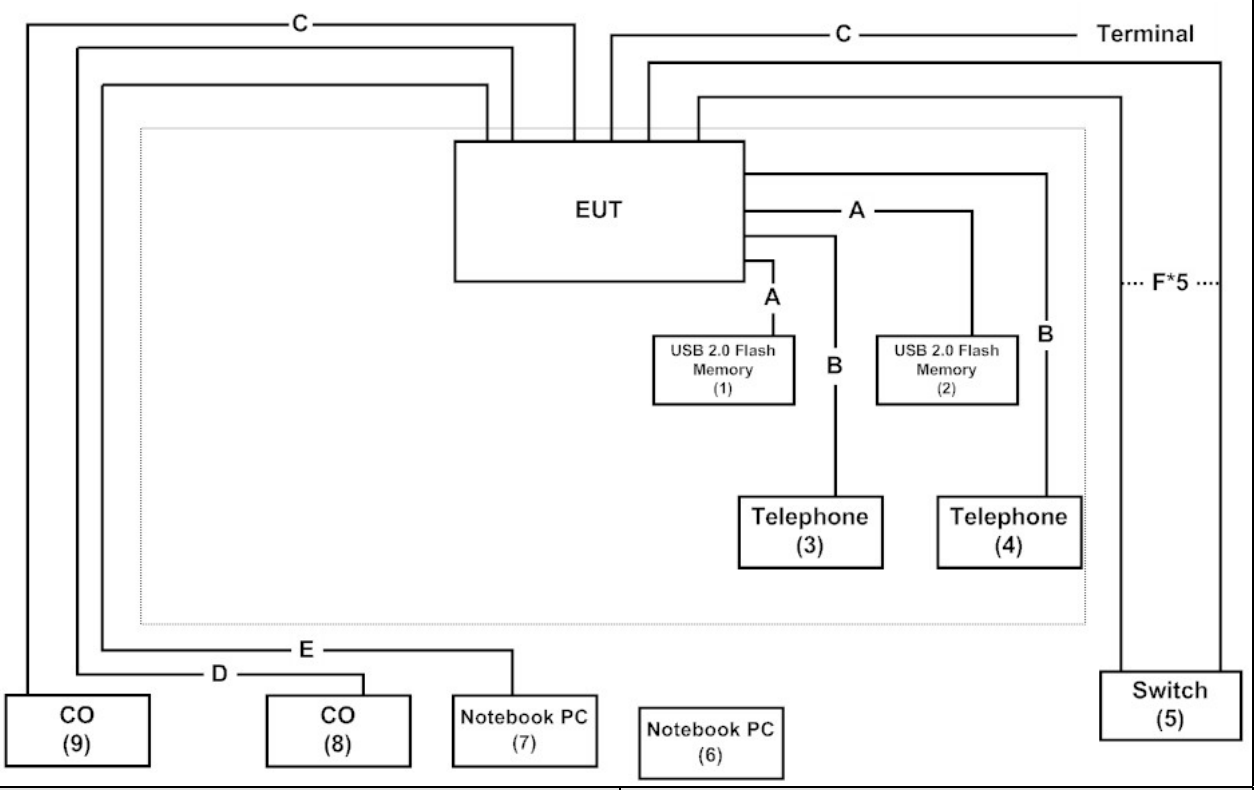
Test Items	Mode	Modulation	Channel	Antenna	Result
Conducted Emission	1	11n(40MHz)	6	0+1	Complies
Peak Power Output	1	b/g	1/ 6/ 11	0	Complies
	1	11n(20MHz)	1/ 6/ 11	0+1	Complies
	1	11n(40MHz)	3/ 6/ 9	0+1	Complies
Radiated Emission	1/2	b/g	1/ 6/ 11	0	Complies
	1/2	11n(20MHz)	1/ 6/ 11	0+1	Complies
	1/2	11n(40MHz)	3/ 6/ 9	0+1	Complies
RF antenna conducted test	1	b/g	1/ 11	0	Complies
	1	11n(20MHz)	1/ 11	0/1	Complies
	1	11n(40MHz)	3/ 9	0/1	Complies
Radiated Emission Band Edge	1	b/g	1/ 11	0	Complies
	1	11n(20MHz)	1/ 11	0+1	Complies
	1	11n(40MHz)	3/ 9	0+1	Complies
Occupied Bandwidth	1	b/g	1/ 6/ 11	0	Complies
	1	11n(20MHz)	1/ 6/ 11	0/1	Complies
	1	11n(40MHz)	3/ 6/ 9	0/1	Complies
Power Density	1	b/g	1/ 6/ 11	0	Complies
	1	11n(20MHz)	1/ 6/ 11	0+1	Complies
	1	11n(40MHz)	3/ 6/ 9	0+1	Complies

1.4. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	FCC ID	Power Cord
1	USB 2.0 Flash Memory	Apacer	AH223	N/A	DoC	--
2	USB 2.0 Flash Memory	Apacer	AH223	N/A	DoC	--
3	Telephone	TENTEL	K-302	41230008000356	DoC	--
4	Telephone	TENTEL	K-302	50721005000518	DoC	--
5	Switch	D-Link	DGS1216T	F360298000042	DoC	Non-Shielded, 1.8m
6	Notebook PC	ACER	PAV70	LUSEW0D0371105FE221601	DoC	Non-Shielded, 2.5m one ferrite core bonded
7	Notebook PC	HP	HSTNN-146C	CNU8253S1X	DoC	Non-Shielded, 1.8m
8	CO	DrayTek	Vigor2750	N/A	DoC	--
9	CO	DrayTek	Vigor 3900	N/A	DoC	--

1.5. Configuration of tested System

Connection Diagram


Signal Cable Type		Signal cable Description
A	USB 2.0 Flash Memory Cable	Shielded, 1m, 2 Pcs
B	Telephone Cable	Non-Shielded, 1.5m, 2 Pcs
C	DSL Cable	Non-Shielded, 10m, 2 Pcs
D	LAN Cable	Non-Shielded, 10m
E	LAN Cable	Non-Shielded, 3m
F	LAN Cable	Non-Shielded, 10m, 5 Pcs

1.6. EUT Exercise Software

1	Setup the EUT as shown in Section 1.5.
2	Execute the Telnet command on the EUT.
3	Configure the test mode, the test channel, and the data rate.
4	Key in TX command to start the continuous transmitting.
5	Verify that the EUT works properly.

1.7. Test Facility

Ambient conditions in the laboratory:

Items	Test Item	Required (IEC 68-1)	Actual
Temperature (°C)	FCC PART 15 C 15.207 Conducted Emission	15 - 35	20
Humidity (%RH)		25 - 75	50
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Peak Power Output (DSSS)	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Radiated Emission (DSSS)	15 - 35	25
Humidity (%RH)		25 - 75	65
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 RF antenna conducted test (DSSS)	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Band Edge (DSSS)	15 - 35	25
Humidity (%RH)		25 - 75	48
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Occupied Bandwidth (DSSS)	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000
Temperature (°C)	FCC PART 15 C 15.247 Power Density (DSSS)	15 - 35	25
Humidity (%RH)		25 - 75	45
Barometric pressure (mbar)		860 - 1060	950-1000

2. Conducted Emission

2.1. Test Equipment

The following test equipments are used during the test:

Conducted Emission / SR3 (For 2.4G)

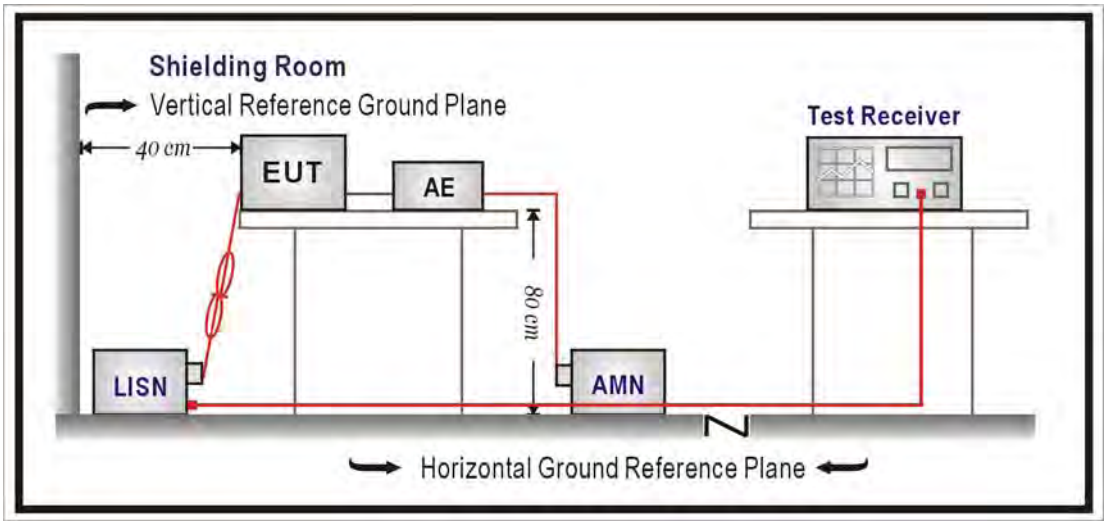
Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
LISN	R&S	ENV216	100096	2014/08/01
LISN	R&S	ESH3-Z5	836679/022	2014/01/20
Test Receiver	R&S	ESCS 30	825442/017	2014/01/01

Conducted Emission / SR2 (For 5.8G)

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	2014/01/24
LISN	R&S	ENV216	100092	2014/08/20
Test Receiver	R&S	ESCS 30	825442/014	2014/08/06

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 Limits (dBuV)		
Frequency MHz	QP	AV
0.15 - 0.50	66-56	56-46
0.50 - 5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges.

2.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.
The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs.)
Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

2.5. Test Specification

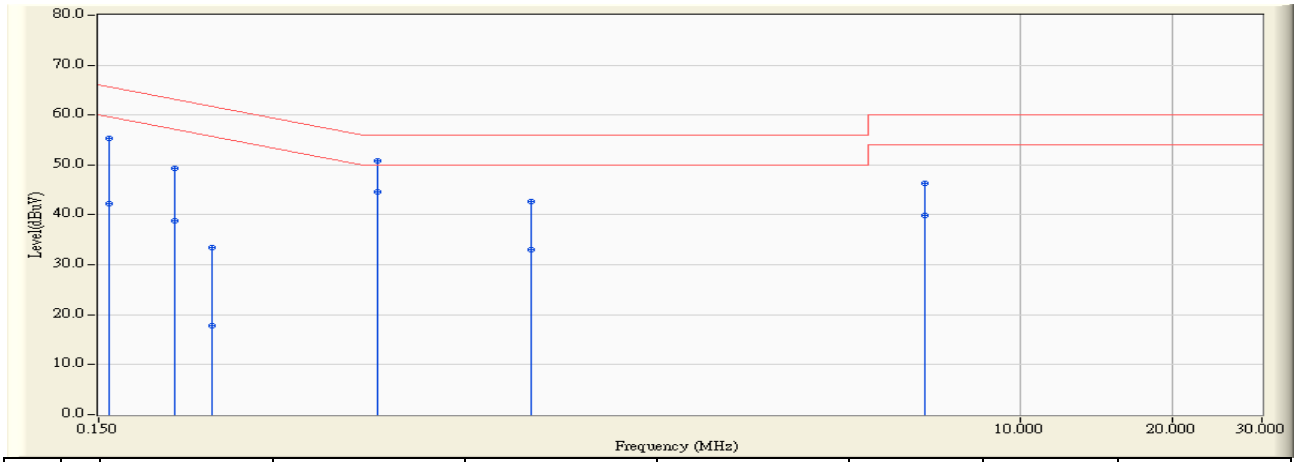
According to FCC Part 15 Subpart C Paragraph 15.207: 2012

2.6. Uncertainty

The measurement uncertainty is defined as ± 2.26 dB.

2.7. Test Result

Site : SR3	**Time : 2013/08/20 - 10:18**
Limit : CISPR_B_00M_QP	**Margin : 6**
Probe : SR3_LISN(16A)-3_0813 - Line1	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n40MHz_2437MHz**

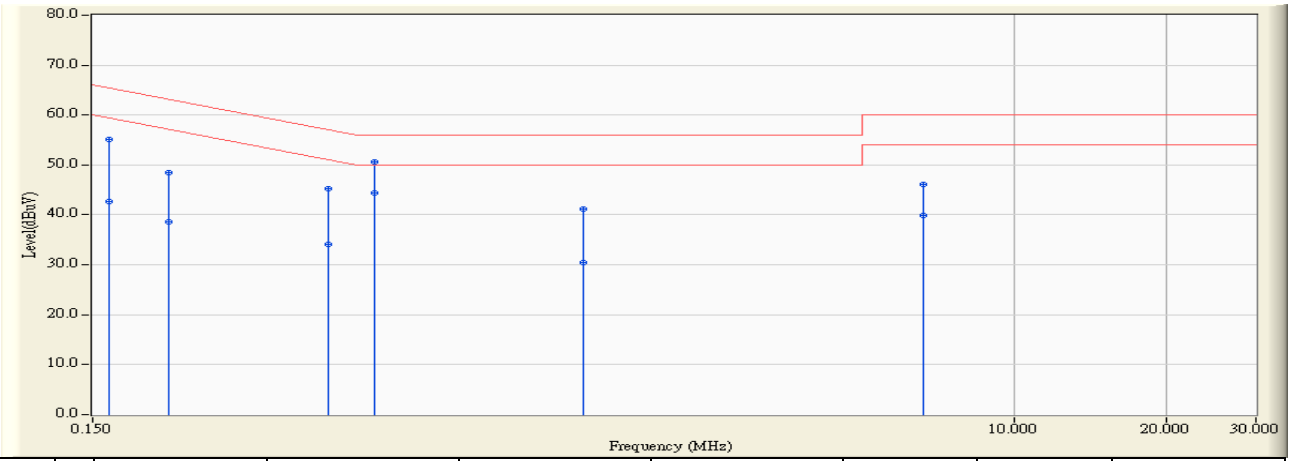


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.158	9.641	45.680	55.320	-10.258	65.578	QUASIPEAK
2		0.158	9.641	32.660	42.300	-13.278	55.578	AVERAGE
3		0.212	9.666	39.560	49.226	-13.881	63.107	QUASIPEAK
4		0.212	9.666	29.070	38.736	-14.371	53.107	AVERAGE
5		0.252	9.691	23.730	33.421	-28.285	61.705	QUASIPEAK
6		0.252	9.691	8.040	17.731	-33.975	51.705	AVERAGE
7		0.533	9.835	40.950	50.785	-5.215	56.000	QUASIPEAK
8	*	0.533	9.835	34.820	44.655	-1.345	46.000	AVERAGE
9		1.072	9.940	32.800	42.740	-13.260	56.000	QUASIPEAK
10		1.072	9.940	23.160	33.100	-12.900	46.000	AVERAGE
11		6.463	10.110	36.220	46.330	-13.670	60.000	QUASIPEAK
12		6.463	10.110	29.850	39.960	-10.040	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR3	**Time : 2013/08/20 - 10:22**
Limit : CISPR_B_00M_QP	**Margin : 6**
Probe : SR3_LISN(16A)-3_0813 - Line2	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)** **802.11n40MHz_2437MHz**

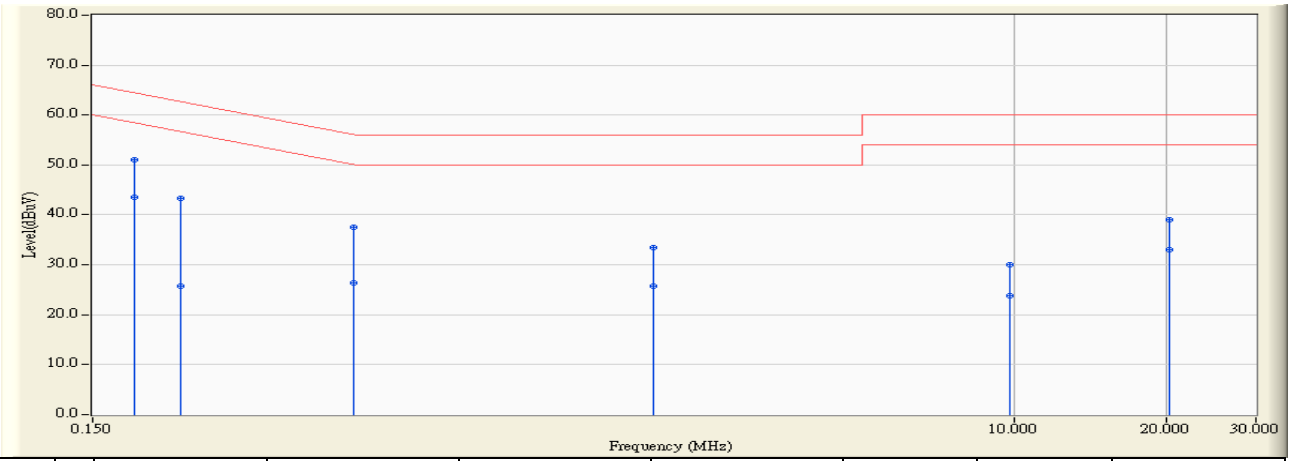


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.162	9.641	45.520	55.161	-10.214	65.375	QUASIPEAK
2		0.162	9.641	33.140	42.781	-12.594	55.375	AVERAGE
3		0.212	9.666	38.910	48.576	-14.531	63.107	QUASIPEAK
4		0.212	9.666	28.920	38.586	-14.521	53.107	AVERAGE
5		0.439	9.787	35.520	45.307	-11.773	57.079	QUASIPEAK
6		0.439	9.787	24.390	34.177	-12.903	47.079	AVERAGE
7		0.541	9.827	40.740	50.567	-5.433	56.000	QUASIPEAK
8	*	0.541	9.827	34.630	44.457	-1.543	46.000	AVERAGE
9		1.404	9.930	31.250	41.180	-14.820	56.000	QUASIPEAK
10		1.404	9.930	20.590	30.520	-15.480	46.000	AVERAGE
11		6.615	10.100	35.910	46.010	-13.990	60.000	QUASIPEAK
12		6.615	10.100	29.720	39.820	-10.180	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR3	**Time : 2013/09/18 - 17:18**
Limit : CISPR_B_00M_QP	**Margin : 6**
Probe : SR3_LISN(16A)-3_0813 - Line1	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode2: Transmit (Adapter: HK-AX-120A200-US) 802.11n40MHz_2437MHz**

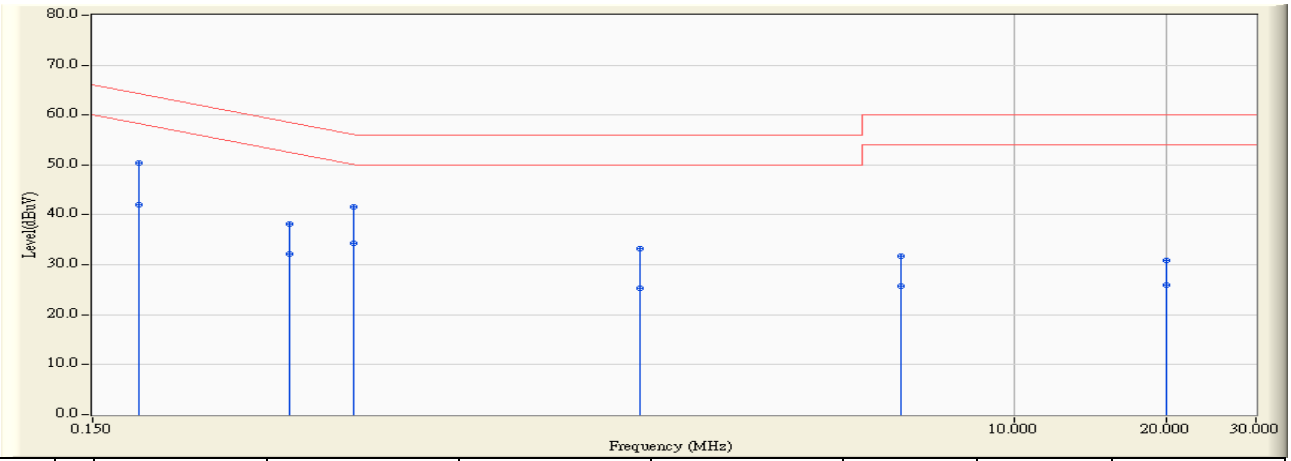


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.181	9.647	41.470	51.117	-13.311	64.428	QUASIPEAK
2	*	0.181	9.647	33.820	43.467	-10.961	54.428	AVERAGE
3		0.224	9.674	33.740	43.414	-19.248	62.661	QUASIPEAK
4		0.224	9.674	16.020	25.694	-26.968	52.661	AVERAGE
5		0.494	9.822	27.710	37.532	-18.573	56.104	QUASIPEAK
6		0.494	9.822	16.530	26.352	-19.753	46.104	AVERAGE
7		1.927	9.960	23.510	33.470	-22.530	56.000	QUASIPEAK
8		1.927	9.960	15.680	25.640	-20.360	46.000	AVERAGE
9		9.752	10.110	19.880	29.990	-30.010	60.000	QUASIPEAK
10		9.752	10.110	13.610	23.720	-26.280	50.000	AVERAGE
11		20.170	10.130	28.910	39.040	-20.960	60.000	QUASIPEAK
12		20.170	10.130	22.860	32.990	-17.010	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR3	**Time : 2013/09/18 - 17:20**
Limit : CISPR_B_00M_QP	**Margin : 6**
Probe : SR3_LISN(16A)-3_0813 - Line2	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode2: Transmit (Adapter: HK-AX-120A200-US) 802.11n40MHz_2437MHz**

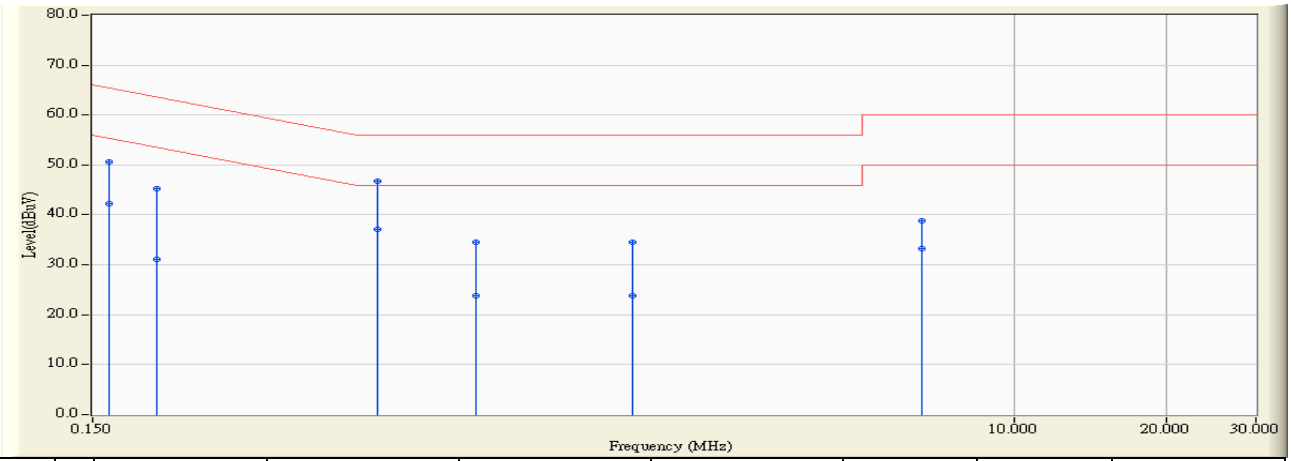


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.185	9.649	40.830	50.479	-13.772	64.251	QUASIPEAK
2		0.185	9.649	32.370	42.019	-12.232	54.251	AVERAGE
3		0.369	9.750	28.340	38.090	-20.439	58.529	QUASIPEAK
4		0.369	9.750	22.420	32.170	-16.359	48.529	AVERAGE
5		0.494	9.812	31.740	41.552	-14.553	56.104	QUASIPEAK
6	*	0.494	9.812	24.500	34.312	-11.793	46.104	AVERAGE
7		1.814	9.940	23.250	33.190	-22.810	56.000	QUASIPEAK
8		1.814	9.940	15.380	25.320	-20.680	46.000	AVERAGE
9		5.947	10.090	21.690	31.780	-28.220	60.000	QUASIPEAK
10		5.947	10.090	15.750	25.840	-24.160	50.000	AVERAGE
11		19.959	10.310	20.670	30.980	-29.020	60.000	QUASIPEAK
12		19.959	10.310	15.670	25.980	-24.020	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2	**Time : 2013/11/20 - 20:30**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-3_0822 - Line1	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11 n 40MHz_5795MHz**

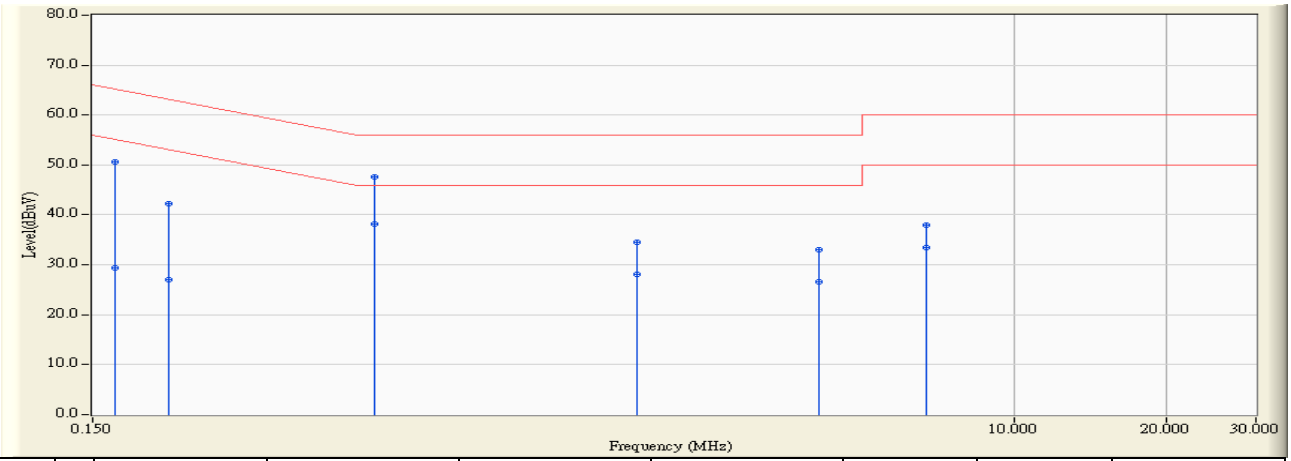


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.162	9.637	40.960	50.597	-14.778	65.375	QUASIPEAK
2		0.162	9.637	32.560	42.197	-13.178	55.375	AVERAGE
3		0.201	9.645	35.700	45.345	-18.233	63.578	QUASIPEAK
4		0.201	9.645	21.520	31.165	-22.413	53.578	AVERAGE
5		0.548	9.732	37.020	46.752	-9.248	56.000	QUASIPEAK
6	*	0.548	9.732	27.350	37.082	-8.918	46.000	AVERAGE
7		0.857	9.738	24.760	34.498	-21.502	56.000	QUASIPEAK
8		0.857	9.738	14.120	23.858	-22.142	46.000	AVERAGE
9		1.752	9.823	24.800	34.623	-21.377	56.000	QUASIPEAK
10		1.752	9.823	14.010	23.833	-22.167	46.000	AVERAGE
11		6.568	10.012	28.720	38.733	-21.267	60.000	QUASIPEAK
12		6.568	10.012	23.300	33.313	-16.687	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2	**Time : 2013/11/20 - 20:42**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-3_0822 - Line2	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11 n 40MHz_5795MHz**

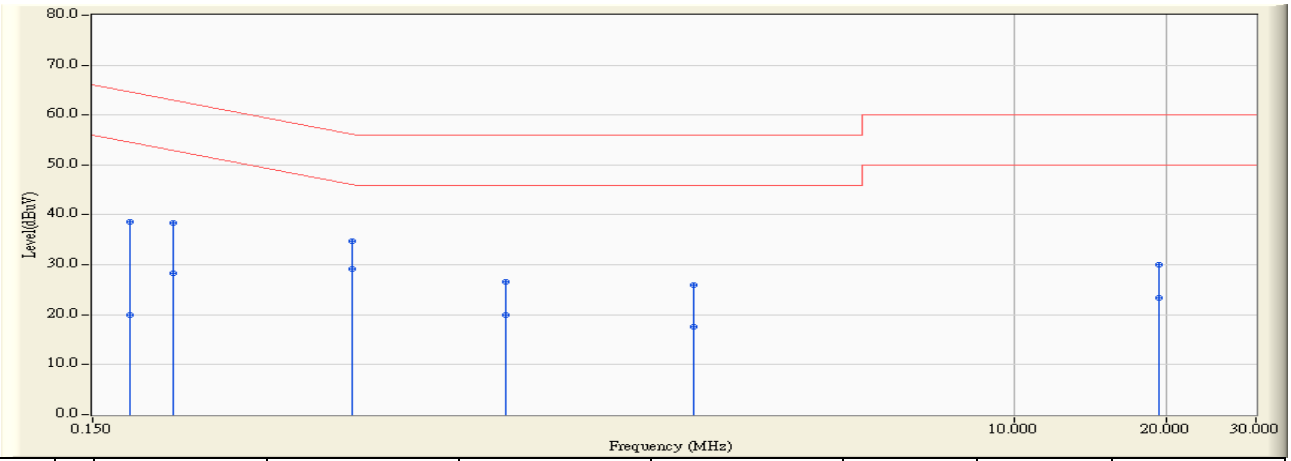


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.166	9.624	41.000	50.624	-14.553	65.177	QUASIPEAK
2		0.166	9.624	19.740	29.364	-25.813	55.177	AVERAGE
3		0.212	9.637	32.580	42.217	-20.890	63.107	QUASIPEAK
4		0.212	9.637	17.280	26.917	-26.190	53.107	AVERAGE
5		0.541	9.712	37.840	47.552	-8.448	56.000	QUASIPEAK
6	*	0.541	9.712	28.430	38.142	-7.858	46.000	AVERAGE
7		1.791	9.807	24.700	34.507	-21.493	56.000	QUASIPEAK
8		1.791	9.807	18.300	28.107	-17.893	46.000	AVERAGE
9		4.091	9.921	23.140	33.061	-22.939	56.000	QUASIPEAK
10		4.091	9.921	16.640	26.561	-19.439	46.000	AVERAGE
11		6.689	10.020	28.040	38.060	-21.940	60.000	QUASIPEAK
12		6.689	10.020	23.530	33.550	-16.450	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2	**Time : 2013/11/20 - 20:48**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-3_0822 - Line1	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode2: Transmit (Adapter: HK-AX-120A200-US) 802.11n40MHz_5795MHz**

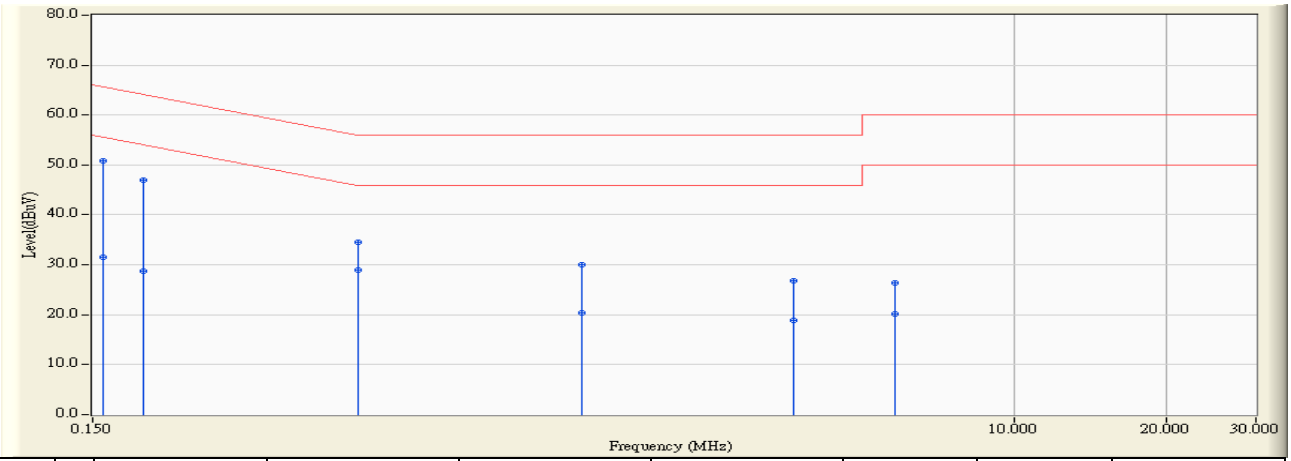


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.177	9.640	28.940	38.580	-26.029	64.609	QUASIPEAK
2		0.177	9.640	10.370	20.010	-34.599	54.609	AVERAGE
3		0.216	9.649	28.820	38.469	-24.487	62.956	QUASIPEAK
4		0.216	9.649	18.630	28.279	-24.677	52.956	AVERAGE
5		0.490	9.729	24.960	34.688	-21.482	56.170	QUASIPEAK
6	*	0.490	9.729	19.390	29.118	-17.052	46.170	AVERAGE
7		0.986	9.740	16.820	26.560	-29.440	56.000	QUASIPEAK
8		0.986	9.740	10.290	20.030	-25.970	46.000	AVERAGE
9		2.318	9.863	16.060	25.922	-30.078	56.000	QUASIPEAK
10		2.318	9.863	7.760	17.622	-28.378	46.000	AVERAGE
11		19.236	10.071	19.860	29.931	-30.069	60.000	QUASIPEAK
12		19.236	10.071	13.310	23.381	-26.619	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : SR2	**Time : 2013/11/20 - 20:57**
Limit : CISPR_B_00M_QP	**Margin : 10**
Probe : SR2_LISN(16A)-3_0822 - Line2	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode2: Transmit (Adapter: HK-AX-120A200-US) 802.11n40MHz_5795MHz**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.158	9.622	41.300	50.922	-14.656	65.578	QUASIPEAK
2		0.158	9.622	21.930	31.552	-24.026	55.578	AVERAGE
3		0.189	9.631	37.320	46.951	-17.127	64.078	QUASIPEAK
4		0.189	9.631	19.020	28.651	-25.427	54.078	AVERAGE
5		0.502	9.710	24.900	34.610	-21.390	56.000	QUASIPEAK
6		0.502	9.710	19.140	28.850	-17.150	46.000	AVERAGE
7		1.388	9.763	20.220	29.983	-26.017	56.000	QUASIPEAK
8		1.388	9.763	10.620	20.383	-25.617	46.000	AVERAGE
9		3.642	9.901	16.940	26.841	-29.159	56.000	QUASIPEAK
10		3.642	9.901	8.890	18.791	-27.209	46.000	AVERAGE
11		5.779	9.990	16.440	26.429	-33.571	60.000	QUASIPEAK
12		5.779	9.990	10.200	20.189	-29.811	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

3. Peak Power Output

3.1. Test Equipment

The following test equipments are used during the test:

Peak Power / SR7 (For 2.4G)

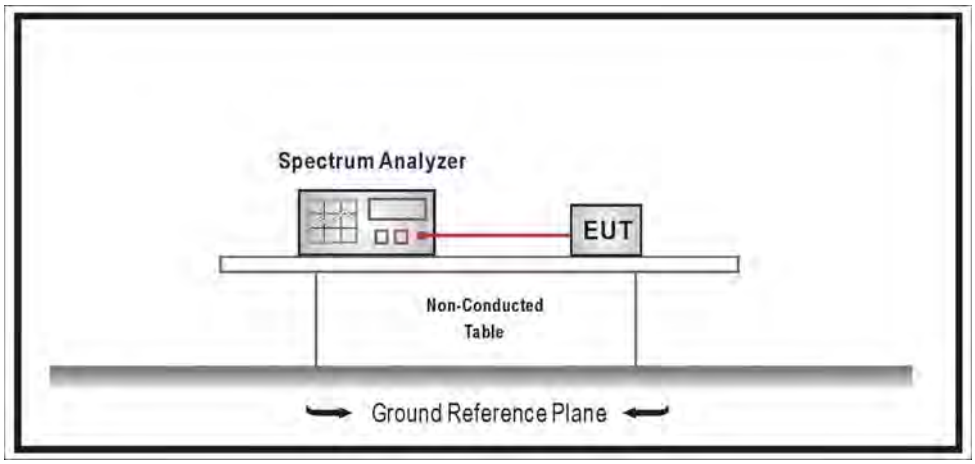
Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2014/08/05

Peak Power / SR7 (For 5.8G)

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2013/07/31

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

3.2. Test Setup



3.3. Test procedures

The EUT was tested according to DTS test procedure of KDB558074, Section 5.2.1.2 Measurement Procedure PK2 for compliance to FCC 47CFR 15.247 requirements.

3.4. Limits

The maximum peak power shall be less 1 Watt.

3.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

3.6. Uncertainty

The measurement uncertainty is defined as ± 1.27 dB.

3.7. Test Result

Product	VDSL2 Security Firewall		
Test Item	Peak Power Output		
Test Mode	Transmit		
Date of Test	2013/07/31	Test Site	SR7

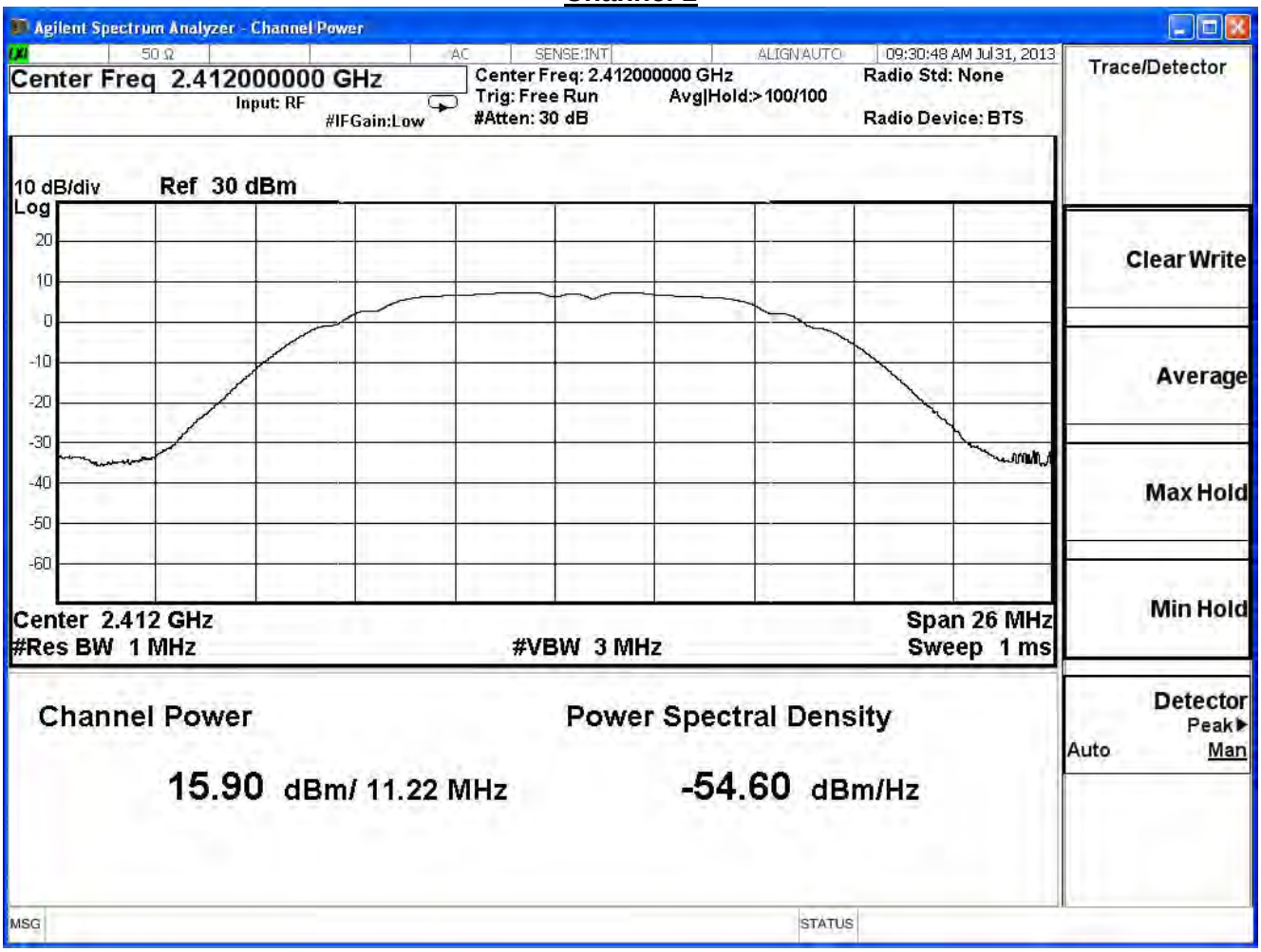
IEEE 802.11b				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	15.90	30	Pass
6	2437	15.58	30	Pass
11	2462	14.59	30	Pass

The worst emission of data rate is 6Mbps.

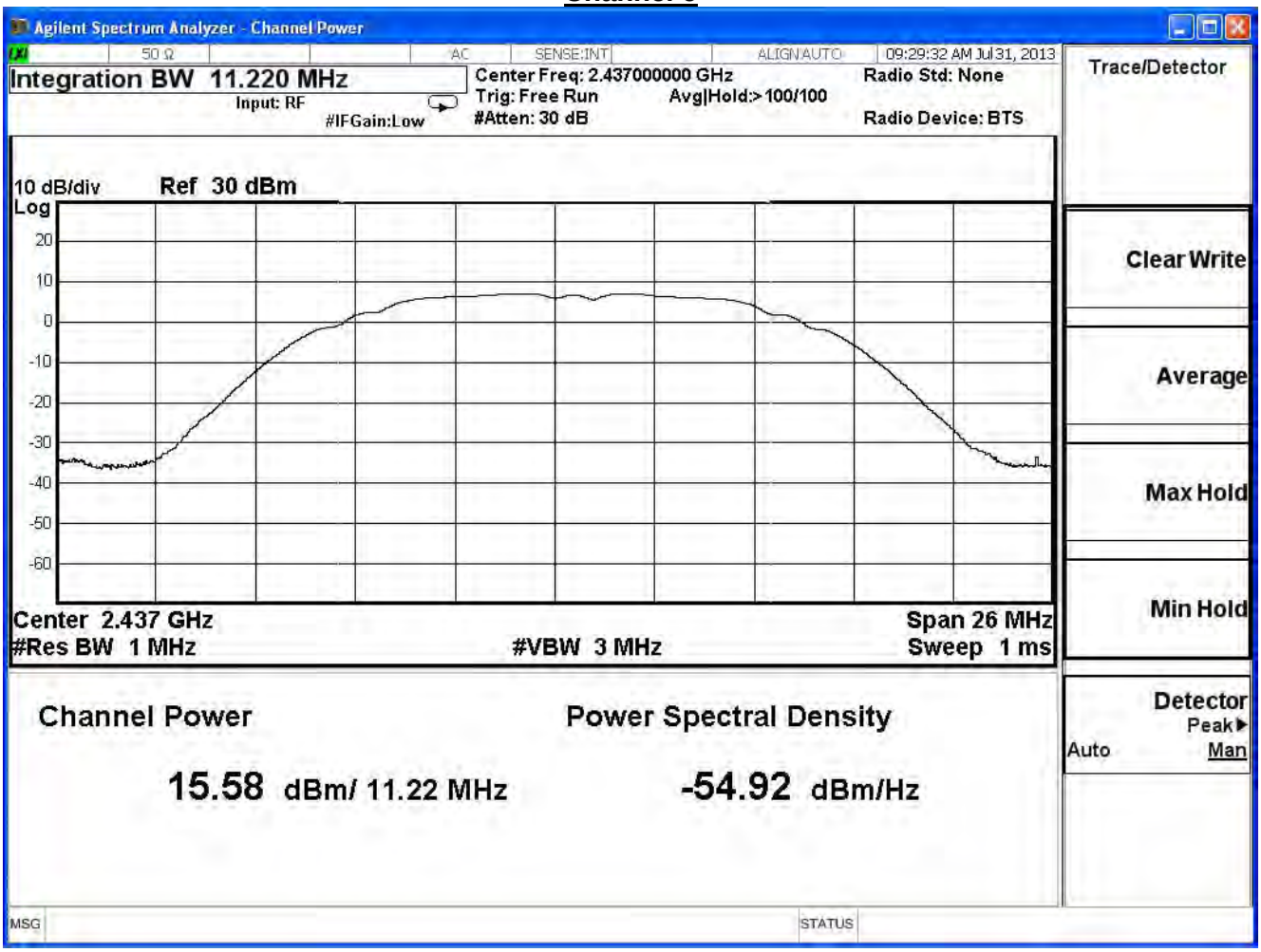
Peak Power Output (dBm)									
Channel No	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
1	2412	15.90	--	--	--	--	--	--	1 Watt=30dBm
6	2437	15.58	15.57	15.56	15.55	15.54	15.53	15.52	1 Watt=30dBm
11	2462	14.59	--	--	--	--	--	--	1 Watt=30dBm

Note: Measure Level =Reading value + cable loss

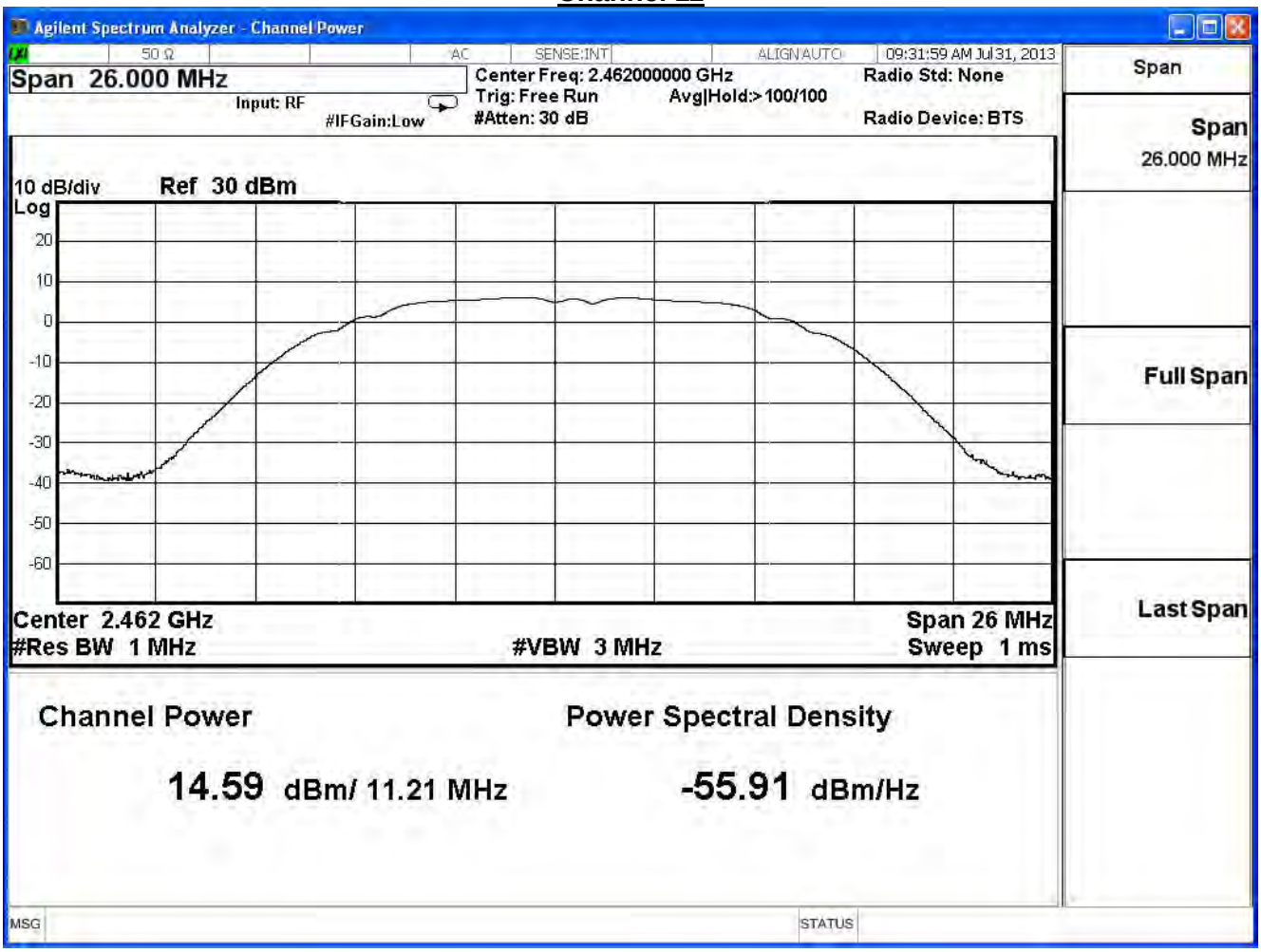
Channel 1


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:30:48 AM Jul 31, 2013
Center Freq 2.412000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.412000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.412 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Clear Write
Average
Max Hold
Min Hold
Detector
Peak
Auto
Man
Channel Power
15.90 dBm/ 11.22 MHz
Power Spectral Density
-54.60 dBm/Hz
MSG
STATUS

Channel 6


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:29:32 AM Jul 31, 2013
Integration BW 11.220 MHz
Input: RF
#IFGain:Low
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.437 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Clear Write
Average
Max Hold
Min Hold
Detector
Peak
Auto
Man
Channel Power
15.58 dBm/ 11.22 MHz
Power Spectral Density
-54.92 dBm/Hz
MSG
STATUS

Channel 11


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:31:59 AM Jul 31, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.462 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
14.59 dBm/ 11.21 MHz
Power Spectral Density
-55.91 dBm/Hz
MSG
STATUS
Span
Span
26.000 MHz
Full Span
Last Span

Product	VDSL2 Security Firewall		
Test Item	Peak Power Output		
Test Mode	Transmit		
Date of Test	2013/07/31	Test Site	SR7

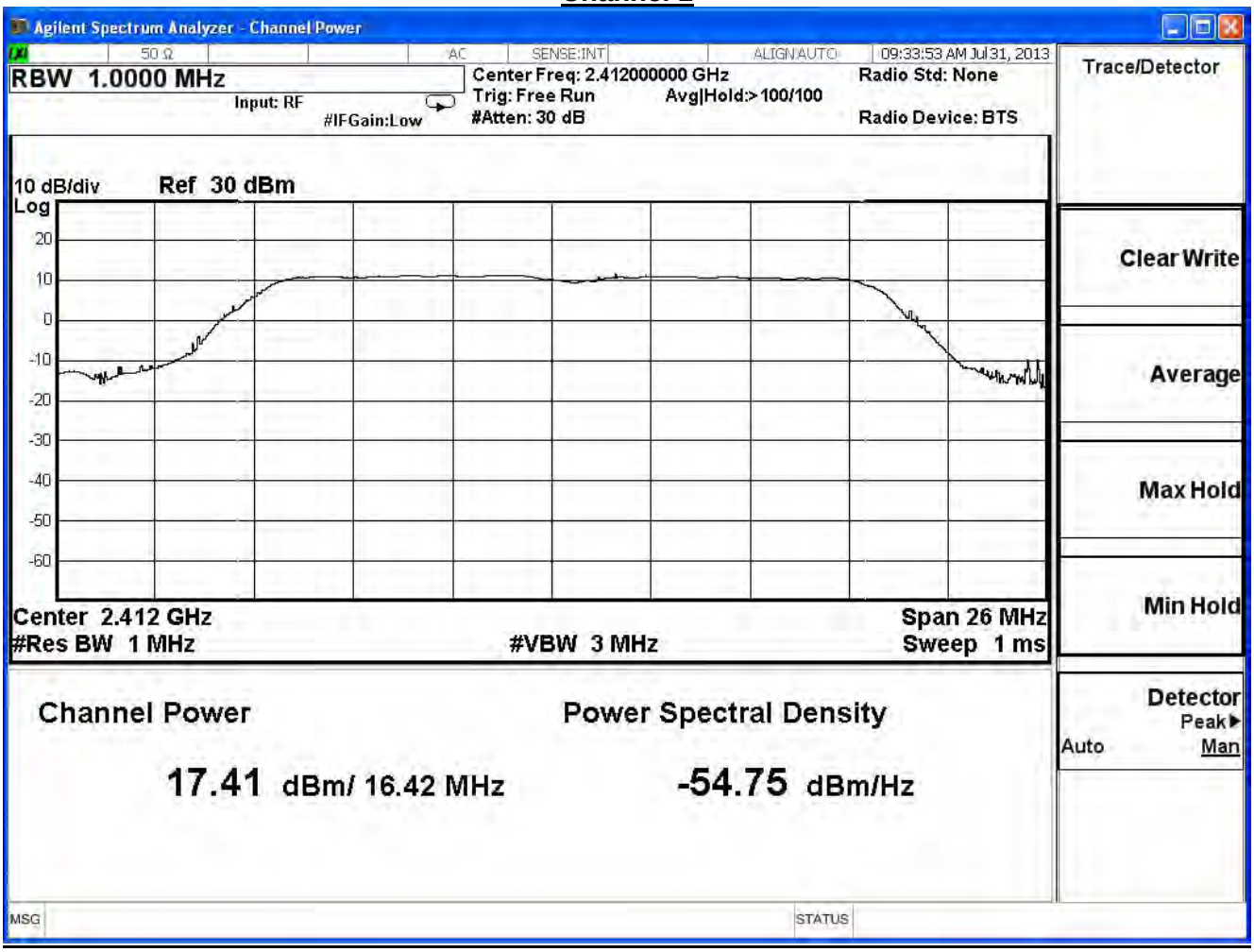
IEEE 802.11g				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	17.41	30	Pass
6	2437	17.13	30	Pass
11	2462	16.53	30	Pass

The worst emission of data rate is 6Mbps.

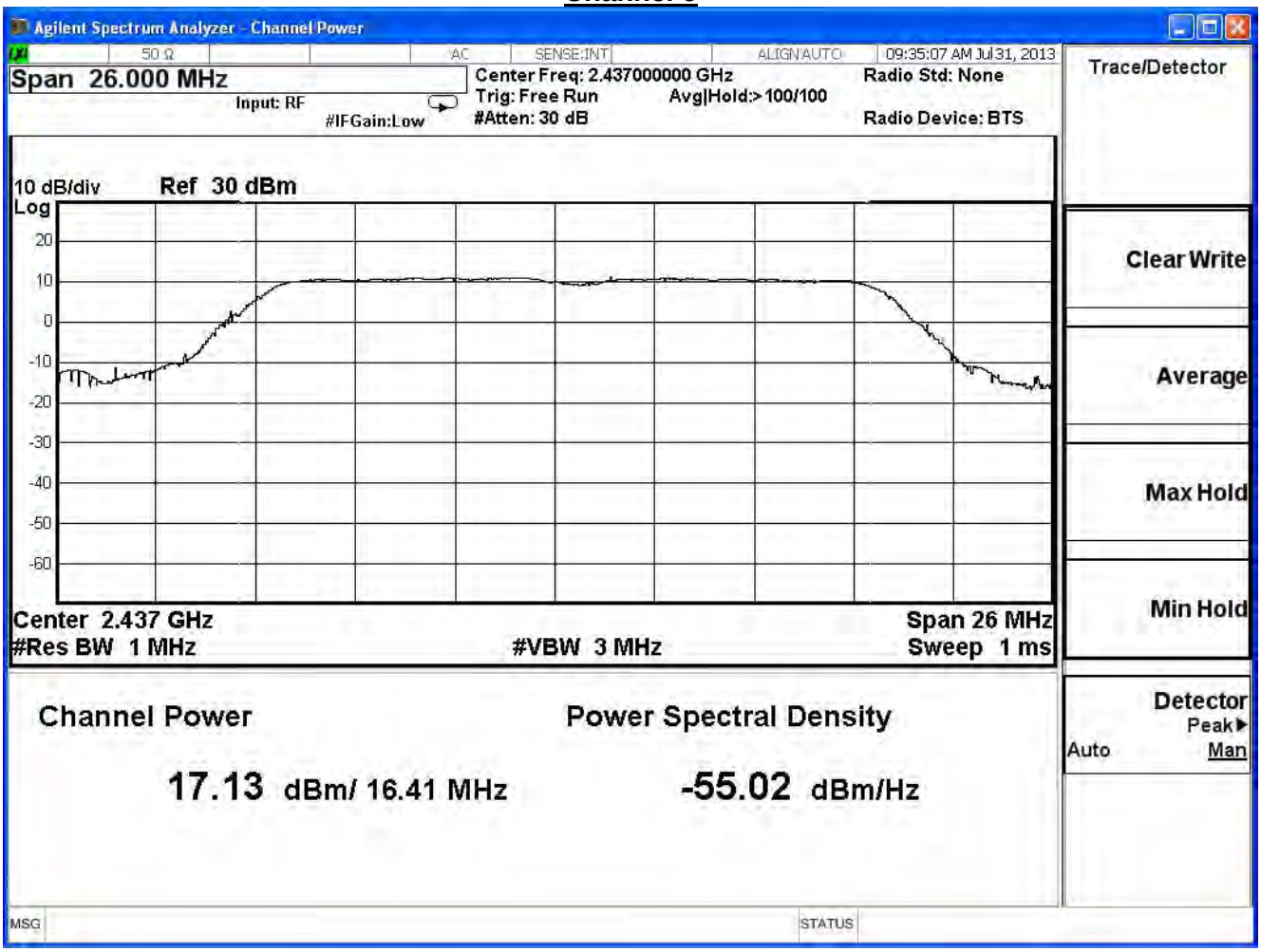
Peak Power Output (dBm)									
Channel No	Frequency (MHz)	Data Rate							Required Limit
		6	12	18	24	36	48	54	
1	2412	17.41	--	--	--	--	--	--	1 Watt=30dBm
6	2437	17.13	17.13	17.12	17.11	17.10	17.09	17.07	1 Watt=30dBm
11	2462	16.53	--	--	--	--	--	--	1 Watt=30dBm

Note: Measure Level =Reading value + cable loss

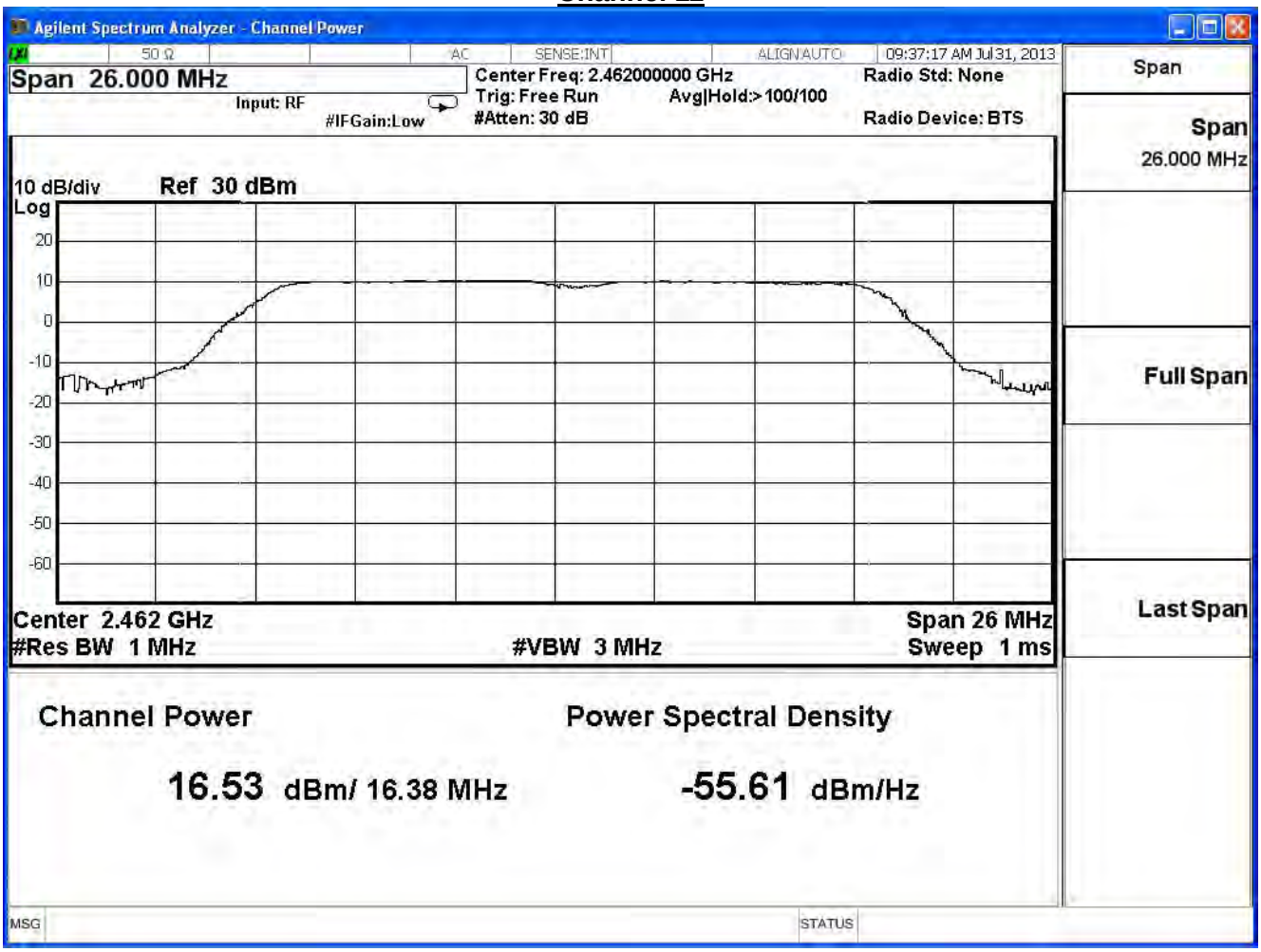
Channel 1


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:33:53 AM Jul 31, 2013
RBW 1.0000 MHz
Input: RF
#IFGain:Low
Center Freq: 2.412000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.412 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Clear Write
Average
Max Hold
Min Hold
Detector
Peak
Auto
Man
Channel Power
17.41 dBm/ 16.42 MHz
Power Spectral Density
-54.75 dBm/Hz
MSG
STATUS

Channel 6


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:35:07 AM Jul 31, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.437 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Clear Write
Average
Max Hold
Min Hold
Detector
Peak
Auto
Man
Channel Power
17.13 dBm/ 16.41 MHz
Power Spectral Density
-55.02 dBm/Hz
MSG
STATUS

Channel 11


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:37:17 AM Jul 31, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.462 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
16.53 dBm/ 16.38 MHz
Power Spectral Density
-55.61 dBm/Hz
MSG
STATUS
Span
Span
26.000 MHz
Full Span
Last Span

Product	VDSL2 Security Firewall		
Test Item	Peak Power Output		
Test Mode	Transmit		
Date of Test	2013/07/31	Test Site	SR7

IEEE 802.11n20MHz (ANT 0)

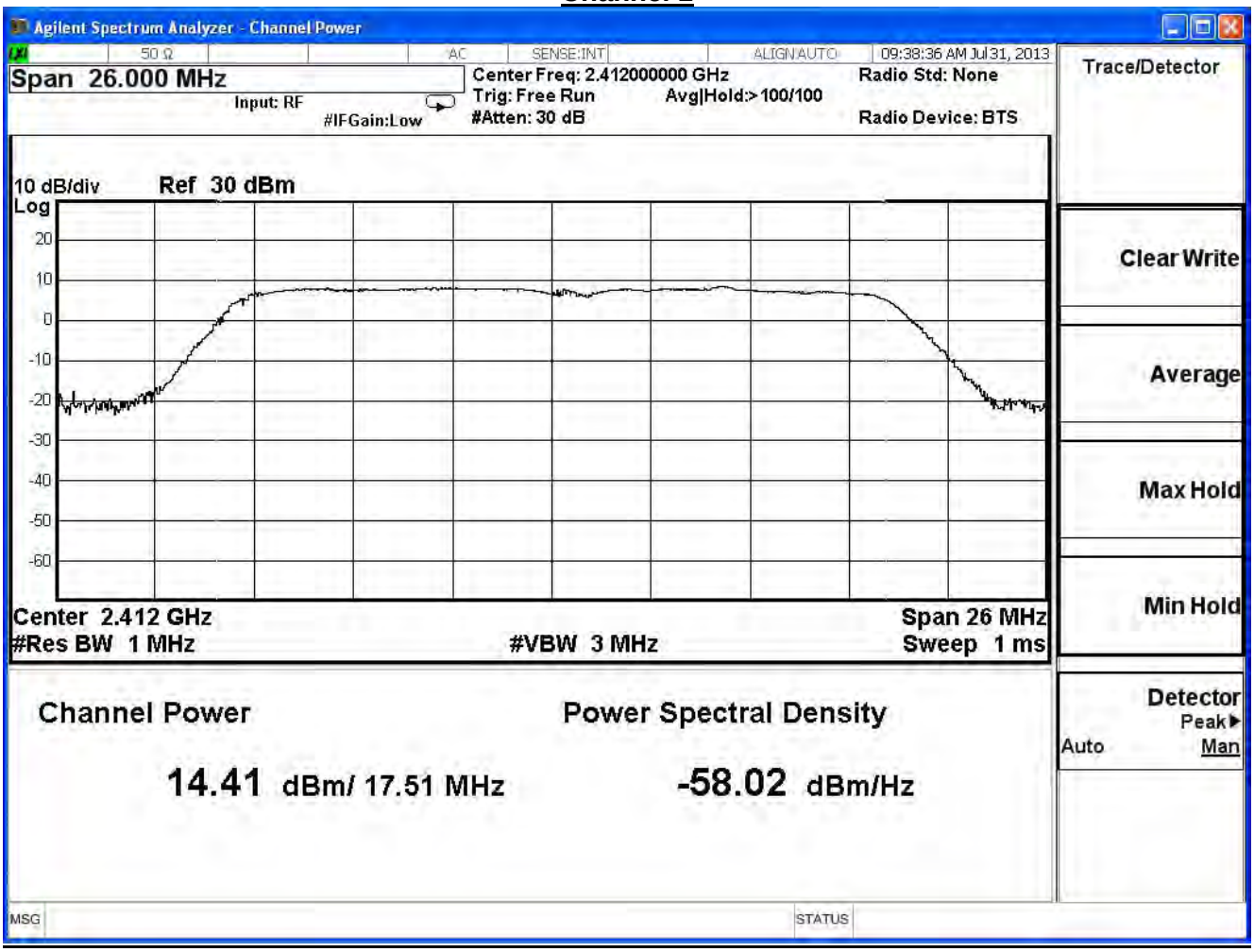
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	14.41	30	Pass
6	2437	12.78	30	Pass
11	2462	12.04	30	Pass

The worst emission of data rate is 19.5Mbps.

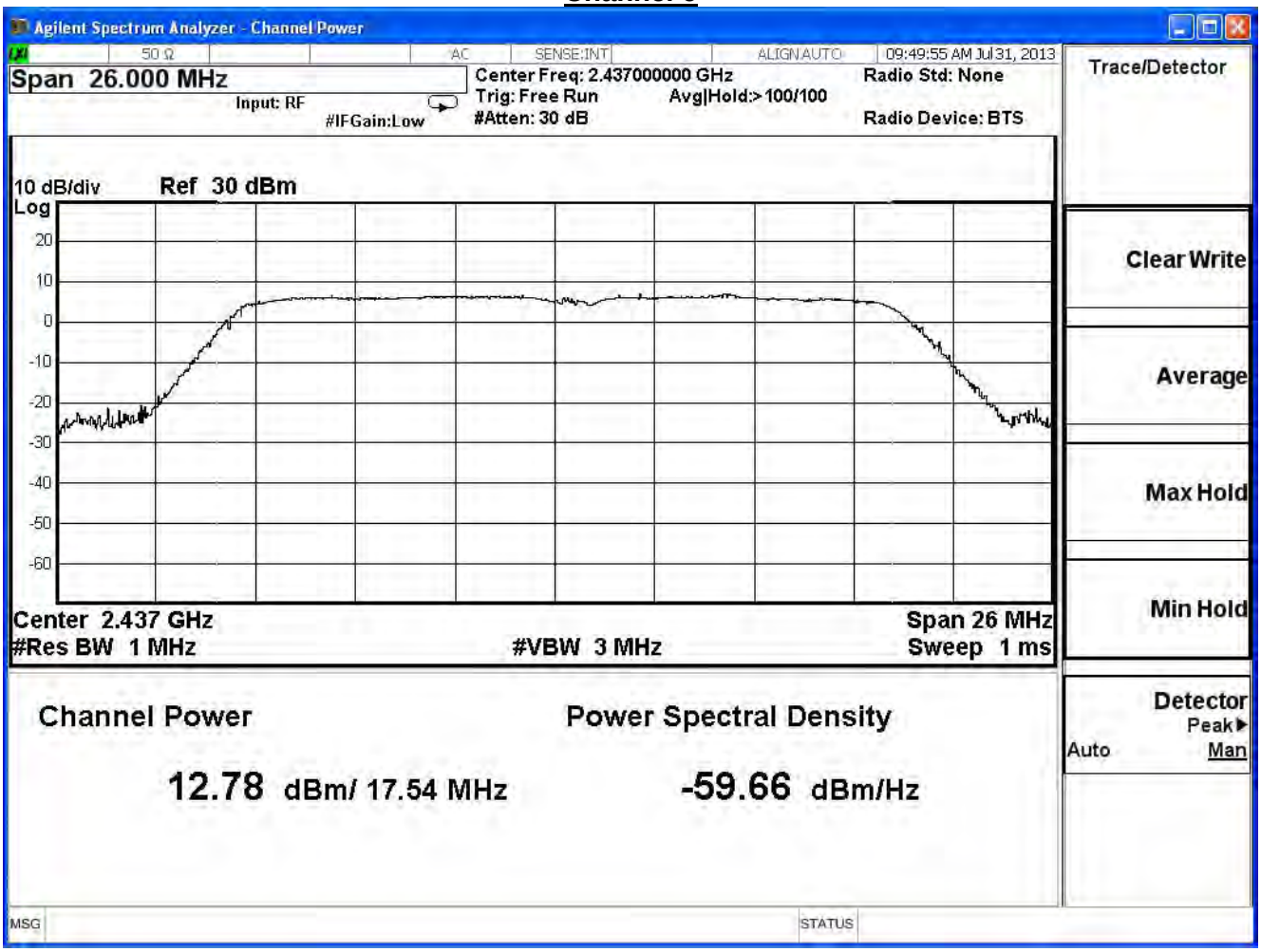
Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
1	2412	14.41	--	--	--	--	--	--	--	30dBm
6	2437	12.78	12.77	12.76	12.75	12.74	12.73	12.72	12.71	30dBm
11	2462	12.04	--	--	--	--	--	--	--	30dBm

Note: Measure Level =Reading value + cable loss

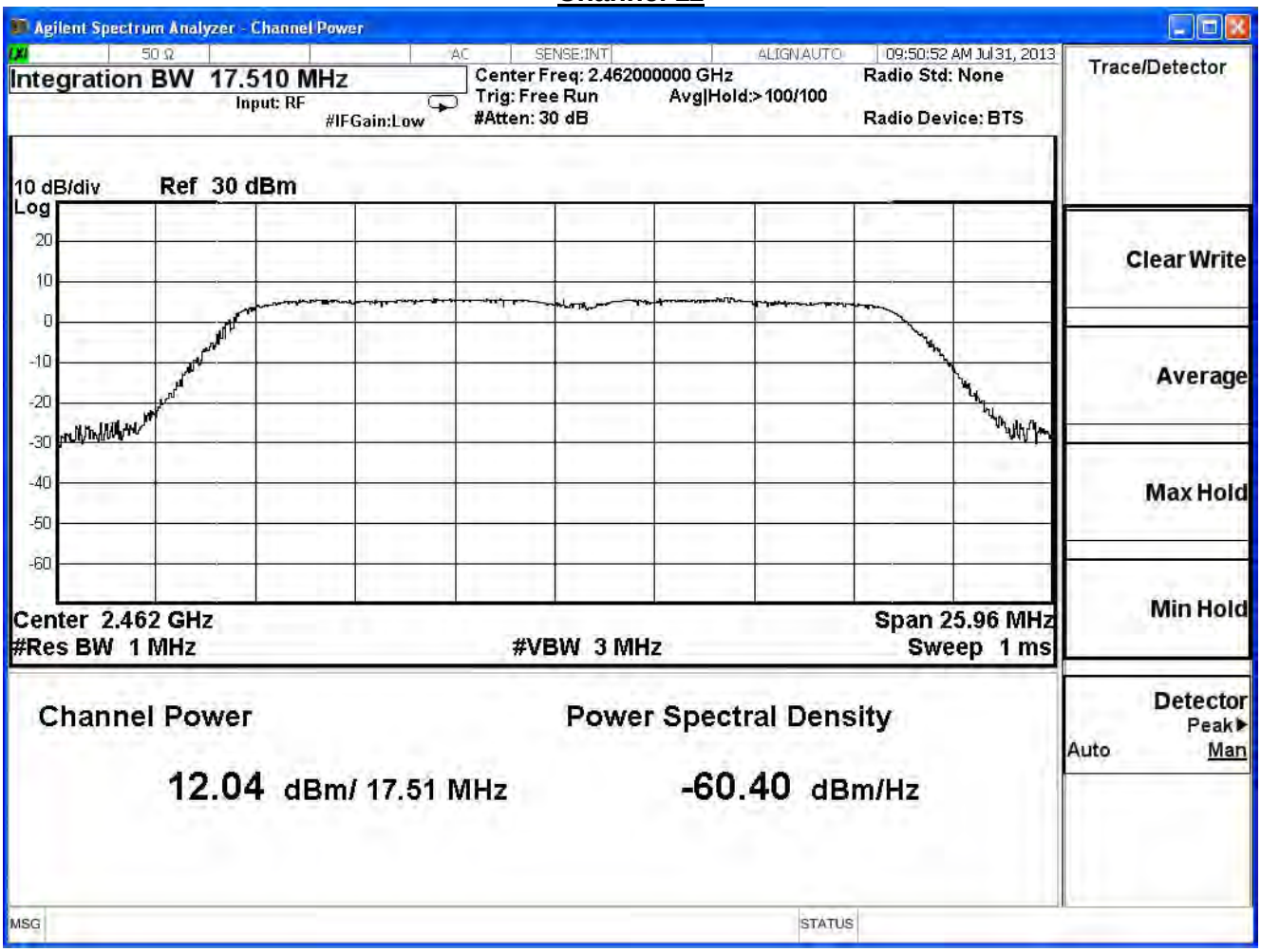
Channel 1


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:38:36 AM Jul 31, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 2.412000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.412 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Clear Write
Average
Max Hold
Min Hold
Detector
Peak
Auto
Man
Channel Power
14.41 dBm/ 17.51 MHz
Power Spectral Density
-58.02 dBm/Hz
MSG
STATUS

Channel 6


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:49:55 AM Jul 31, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.437 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Clear Write
Average
Max Hold
Min Hold
Detector
Peak
Auto
Man
Channel Power
12.78 dBm/ 17.54 MHz
Power Spectral Density
-59.66 dBm/Hz
MSG
STATUS

Channel 11


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:50:52 AM Jul 31, 2013
Integration BW 17.510 MHz
Input: RF
#IFGain:Low
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.462 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 25.96 MHz
Sweep 1 ms
Clear Write
Average
Max Hold
Min Hold
Detector
Peak
Auto
Man
Channel Power
12.04 dBm/ 17.51 MHz
Power Spectral Density
-60.40 dBm/Hz
MSG
STATUS

Product	VDSL2 Security Firewall		
Test Item	Peak Power Output		
Test Mode	Transmit		
Date of Test	2013/07/31	Test Site	SR7

IEEE 802.11n20MHz (ANT 1)

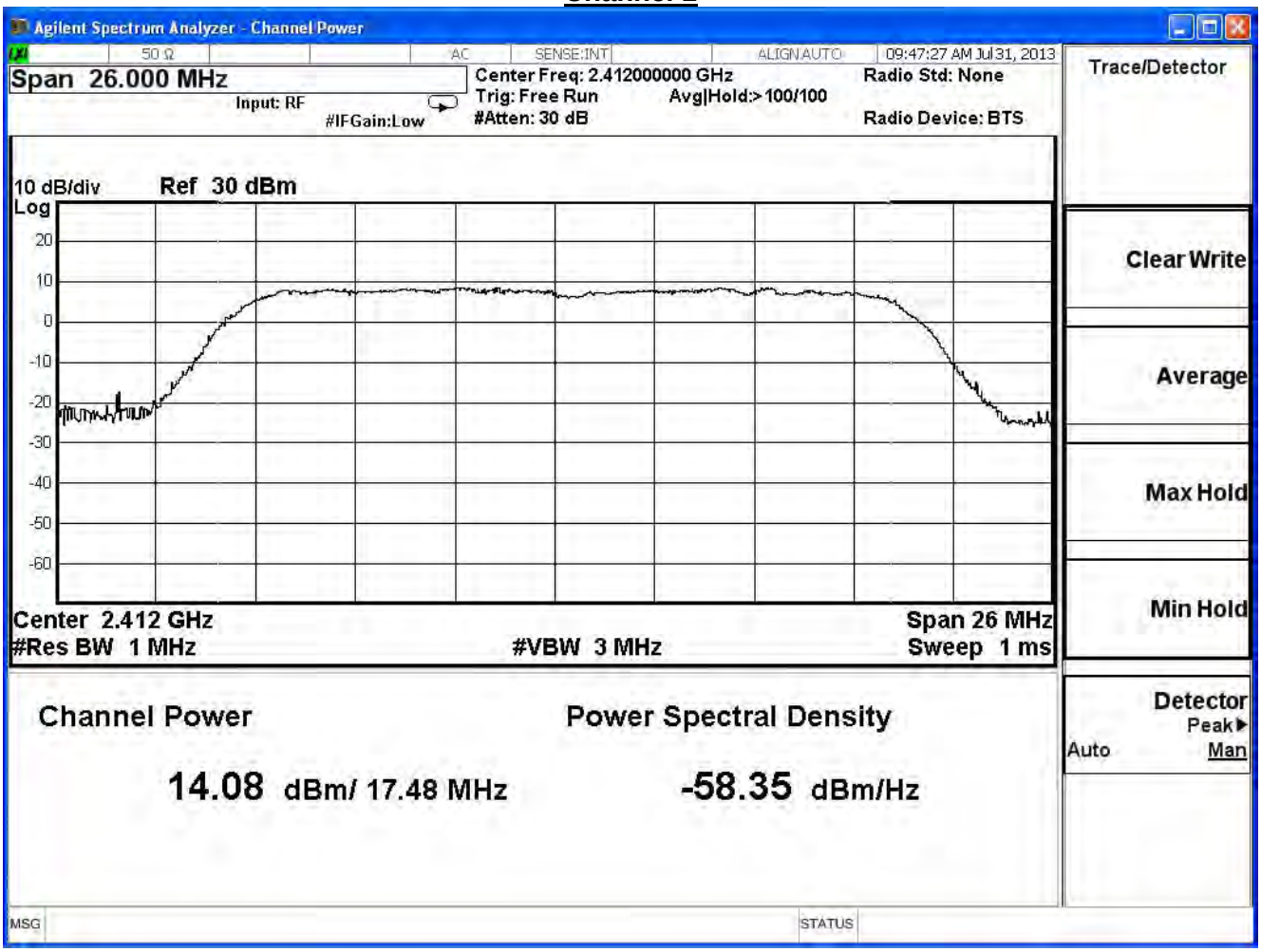
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	14.08	30	Pass
6	2437	14.36	30	Pass
11	2462	13.96	30	Pass

The worst emission of data rate is 19.5Mbps.

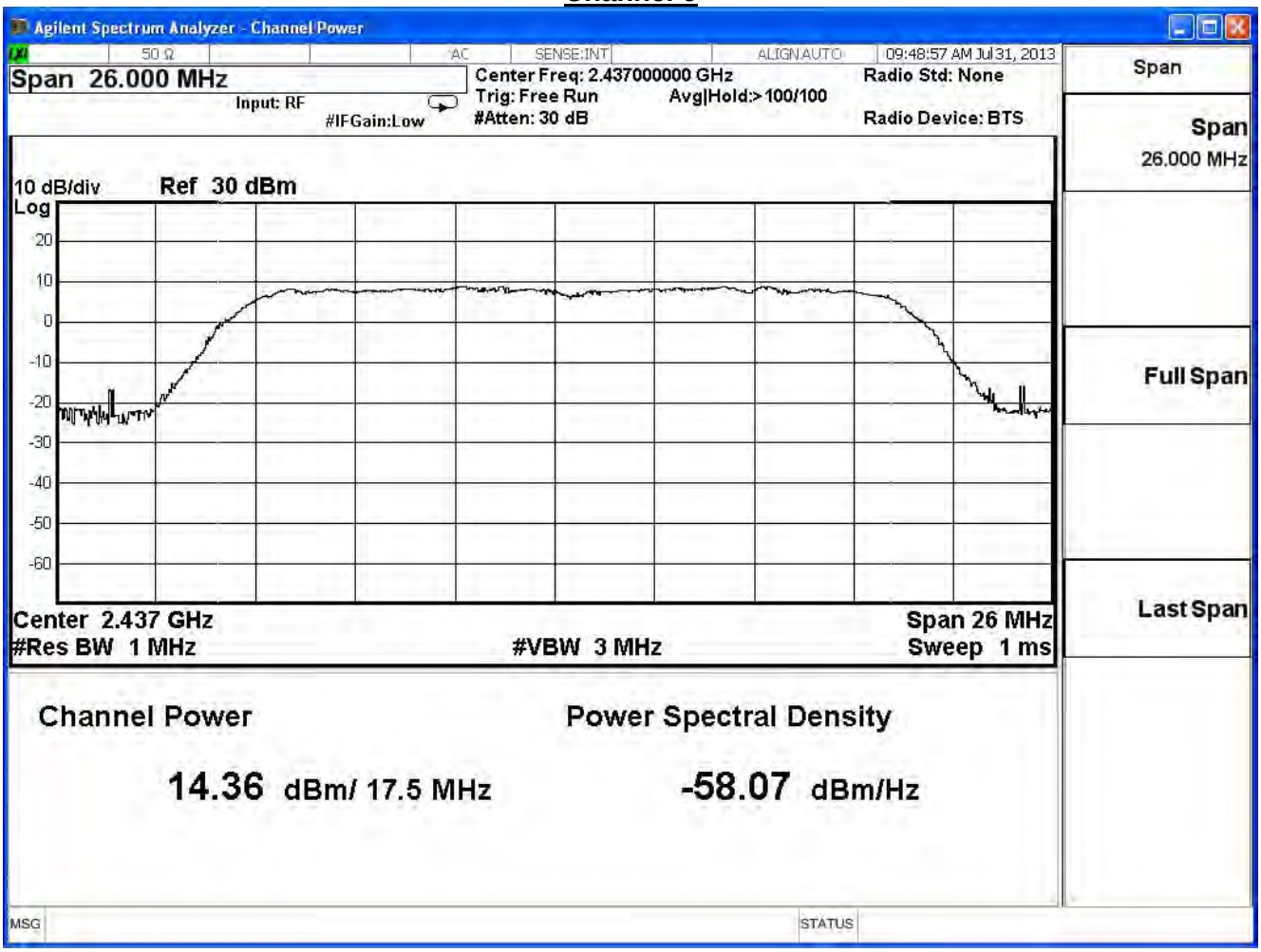
Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		19.5	39	58.5	78	117	156	175.5	195	
1	2412	14.08	--	--	--	--	--	--	--	30dBm
6	2437	14.36	14.35	14.34	14.33	14.32	14.31	14.30	14.29	30dBm
11	2462	13.96	--	--	--	--	--	--	--	30dBm

Note: Measure Level =Reading value + cable loss

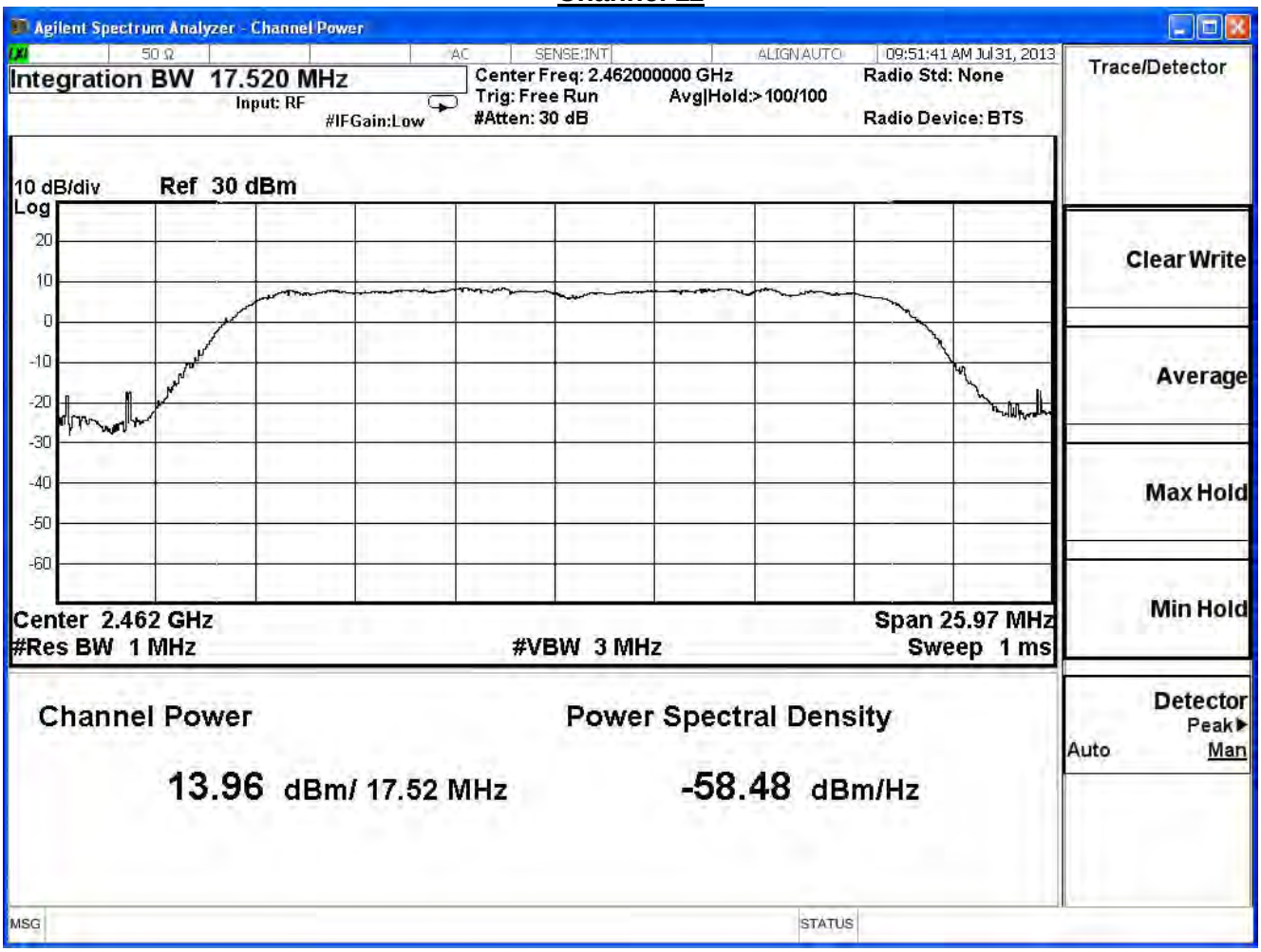
Channel 1


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:47:27 AM Jul 31, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 2.412000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.412 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Clear Write
Average
Max Hold
Min Hold
Detector
Peak
Auto
Man
Channel Power
14.08 dBm/ 17.48 MHz
Power Spectral Density
-58.35 dBm/Hz
MSG
STATUS

Channel 6


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:48:57 AM Jul 31, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Span
Span
26.000 MHz
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Full Span
Last Span
Center 2.437 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
14.36 dBm/ 17.5 MHz
Power Spectral Density
-58.07 dBm/Hz
MSG
STATUS

Channel 11


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:51:41 AM Jul 31, 2013
Integration BW 17.520 MHz
Input: RF
#IFGain:Low
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.462 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 25.97 MHz
Sweep 1 ms
Clear Write
Average
Max Hold
Min Hold
Detector
Peak
Auto
Man
Channel Power
13.96 dBm/ 17.52 MHz
Power Spectral Density
-58.48 dBm/Hz
MSG
STATUS

Product	VDSL2 Security Firewall		
Test Item	Peak Power Output		
Test Mode	Transmit		
Date of Test	2013/07/31	Test Site	SR7

IEEE 802.11n20MHz (ANT 0+1)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	17.26	30	Pass
6	2437	16.65	30	Pass
11	2462	16.12	30	Pass

Note: Measure Level =Reading value + cable loss

Product	VDSL2 Security Firewall		
Test Item	Peak Power Output		
Test Mode	Transmit		
Date of Test	2013/07/31	Test Site	SR7

IEEE802.11n40MHz(ANT 0)

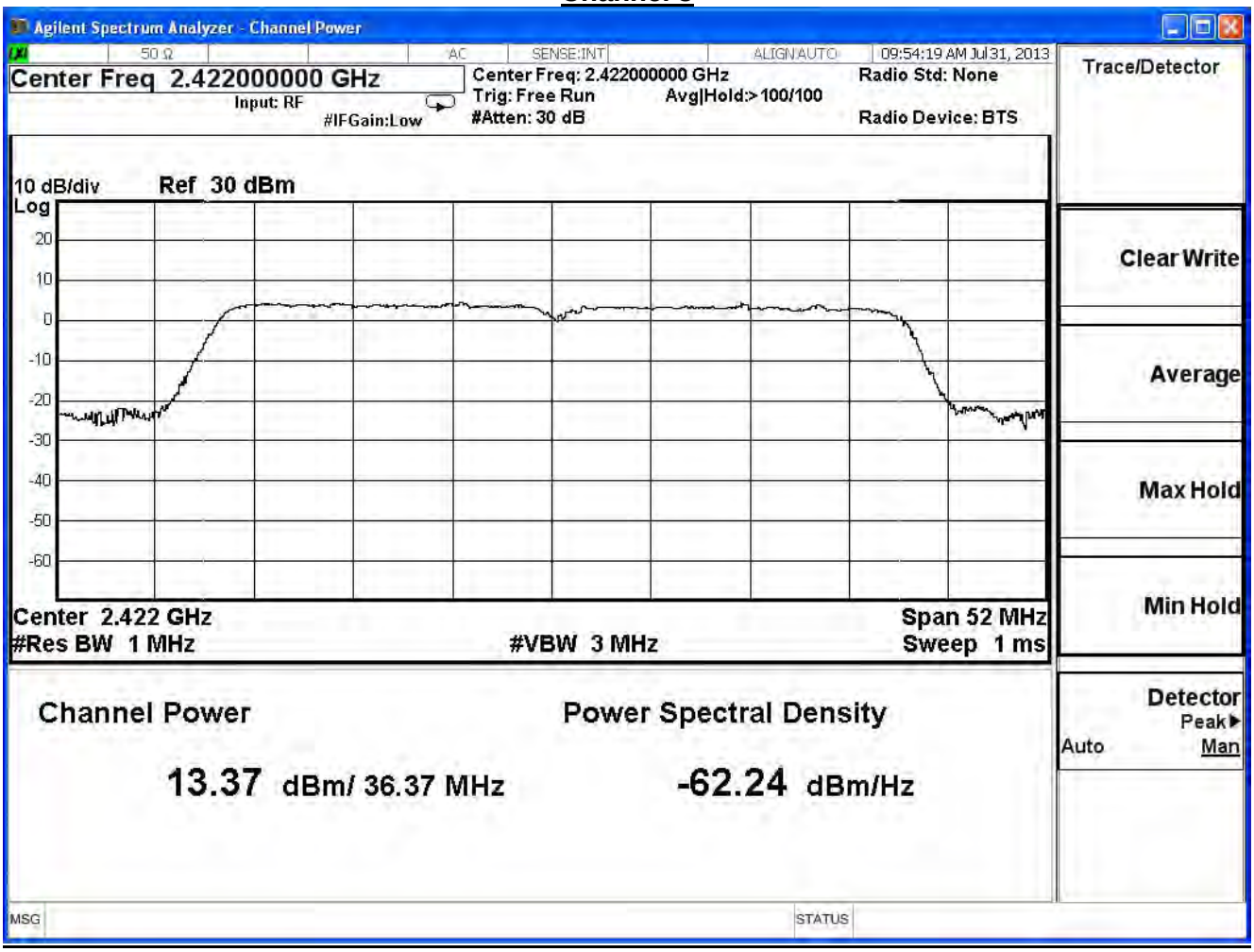
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
3	2422	13.37	30	Pass
6	2437	12.92	30	Pass
9	2452	12.57	30	Pass

The worst emission of data rate is 40.5Mbps

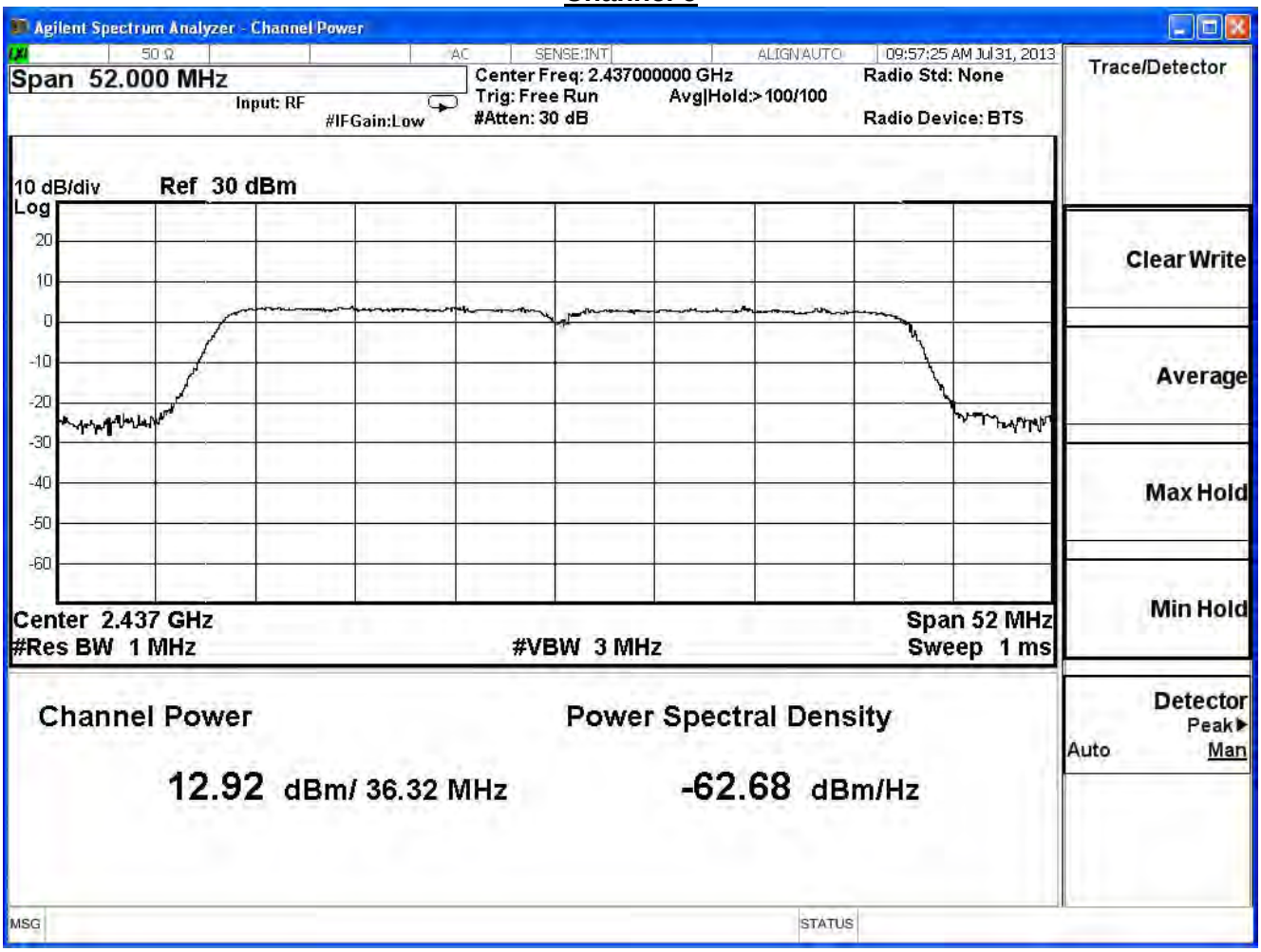
Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81.0	121.5	162.0	243.0	324.0	364.5	405.0	
3	2422	13.37	--	--	--	--	--	--	--	1 Watt=30dBm
6	2437	12.92	12.91	12.90	12.89	12.88	12.87	12.86	12.85	1 Watt=30dBm
9	2452	12.57	--	--	--	--	--	--	--	1 Watt=30dBm

Note: Measure Level =Reading value + cable loss

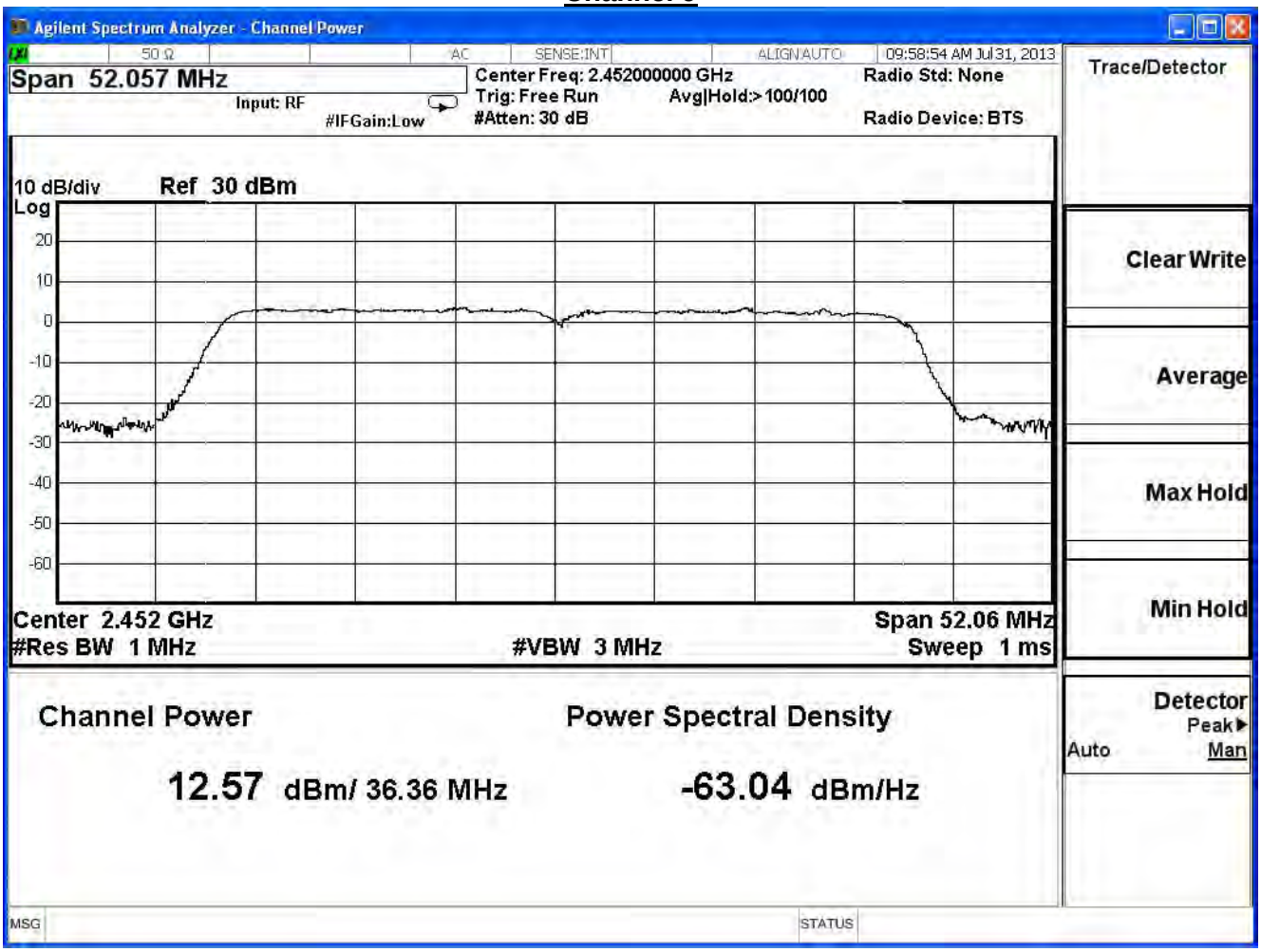
Channel 3


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:54:19 AM Jul 31, 2013
Center Freq 2.422000000 GHz
Input: RF
#IFGain:Low
Center Freq: 2.422000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.422 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 52 MHz
Sweep 1 ms
Clear Write
Average
Max Hold
Min Hold
Detector
Peak
Auto
Man
Channel Power
13.37 dBm/ 36.37 MHz
Power Spectral Density
-62.24 dBm/Hz
MSG
STATUS

Channel 6


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:57:25 AM Jul 31, 2013
Span 52.000 MHz
Input: RF
#IFGain:Low
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.437 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 52 MHz
Sweep 1 ms
Clear Write
Average
Max Hold
Min Hold
Detector
Peak
Auto
Man
Channel Power
12.92 dBm/ 36.32 MHz
Power Spectral Density
-62.68 dBm/Hz
MSG
STATUS

Channel 9


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:58:54 AM Jul 31, 2013
Span 52.057 MHz
Input: RF
#IFGain:Low
Center Freq: 2.452000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.452 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 52.06 MHz
Sweep 1 ms
Clear Write
Average
Max Hold
Min Hold
Detector
Peak
Auto
Man
Channel Power
12.57 dBm/ 36.36 MHz
Power Spectral Density
-63.04 dBm/Hz
MSG
STATUS

Product	VDSL2 Security Firewall		
Test Item	Peak Power Output		
Test Mode	Transmit		
Date of Test	2013/07/31	Test Site	SR7

IEEE802.11n40MHz(ANT 1)

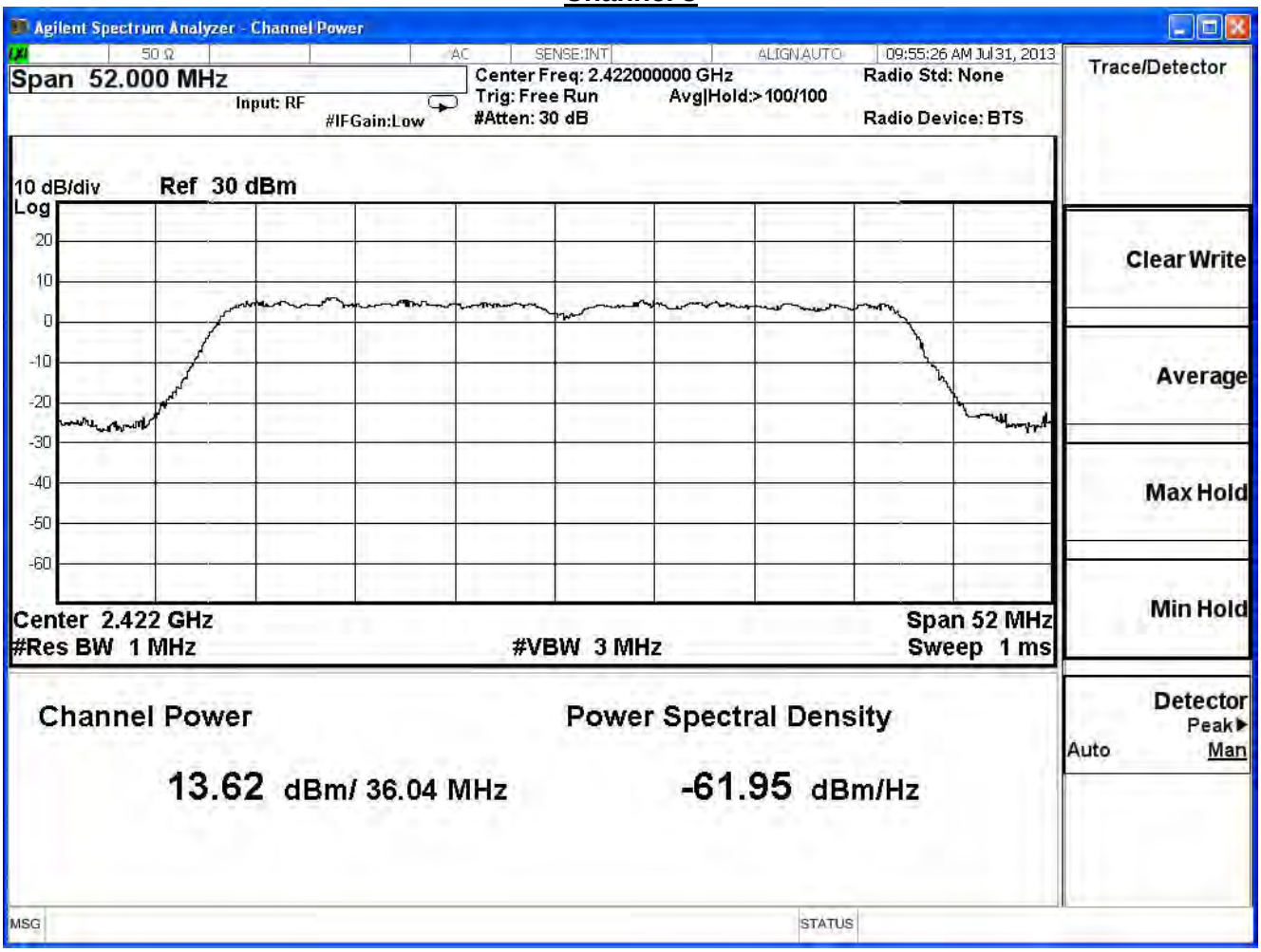
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
3	2422	13.62	30	Pass
6	2437	14.17	30	Pass
9	2452	14.05	30	Pass

The worst emission of data rate is 40.5Mbps

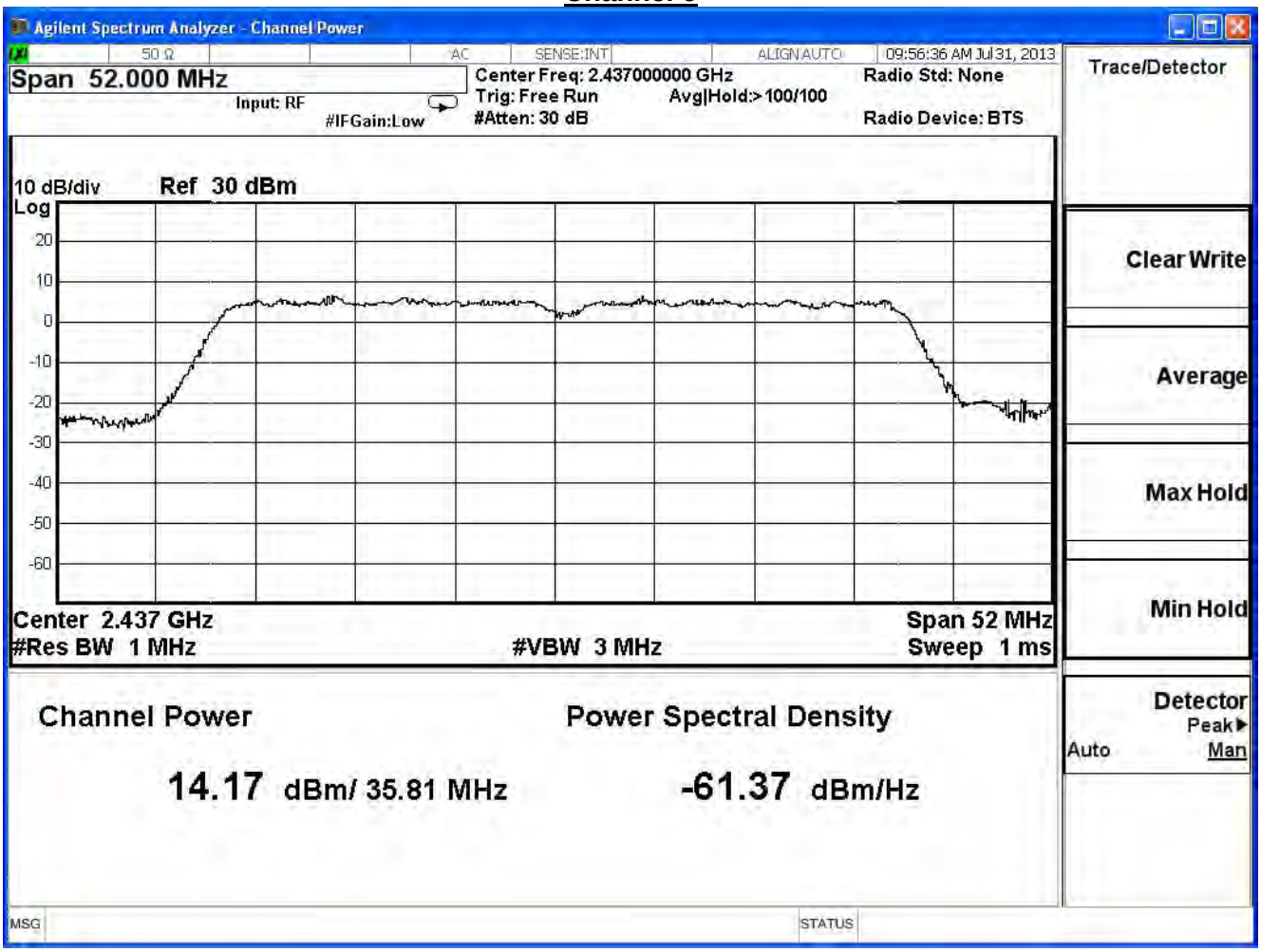
Peak Power Output (dBm)										
MCS Index		16	17	18	19	20	21	22	23	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		40.5	81.0	121.5	162.0	243.0	324.0	364.5	405.0	
3	2422	13.62	--	--	--	--	--	--	--	1 Watt=30dBm
6	2437	14.17	14.16	14.15	14.13	14.12	14.11	14.10	14.08	1 Watt=30dBm
9	2452	14.05	--	--	--	--	--	--	--	1 Watt=30dBm

Note: Measure Level =Reading value + cable loss

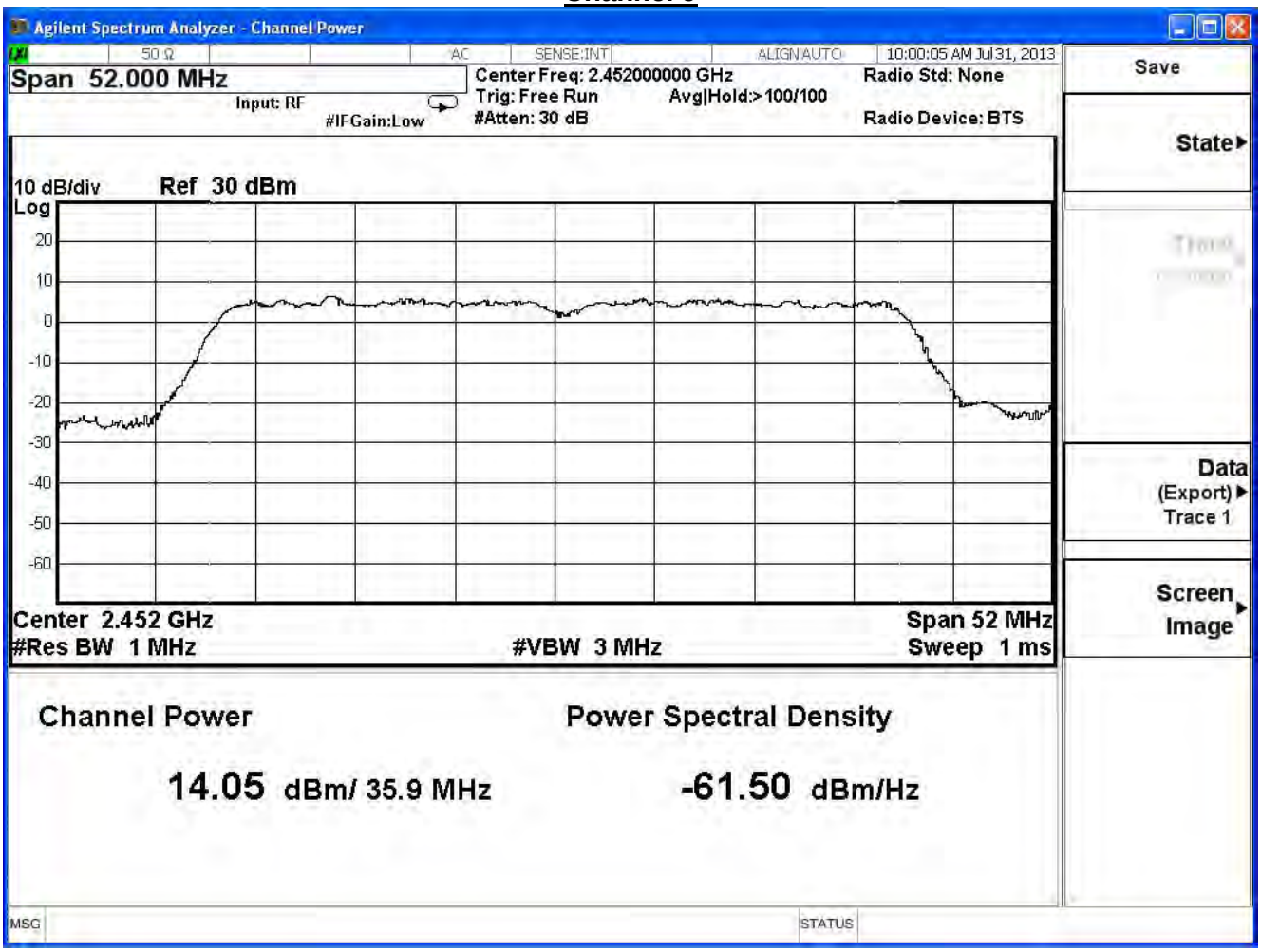
Channel 3


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:55:26 AM Jul 31, 2013
Span 52.000 MHz
Input: RF
#IFGain:Low
Center Freq: 2.422000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.422 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 52 MHz
Sweep 1 ms
Clear Write
Average
Max Hold
Min Hold
Detector
Peak
Auto
Man
Channel Power
13.62 dBm/ 36.04 MHz
Power Spectral Density
-61.95 dBm/Hz
MSG
STATUS

Channel 6


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
09:56:36 AM Jul 31, 2013
Span 52.000 MHz
Input: RF
#IFGain:Low
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.437 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 52 MHz
Sweep 1 ms
Clear Write
Average
Max Hold
Min Hold
Channel Power
14.17 dBm/ 35.81 MHz
Power Spectral Density
-61.37 dBm/Hz
Detector
Peak
Auto
Man
MSG
STATUS

Channel 9


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
10:00:05 AM Jul 31, 2013
Span 52.000 MHz
Input: RF
#IFGain:Low
Center Freq: 2.452000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Save
State
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 2.452 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 52 MHz
Sweep 1 ms
Data
(Export)
Trace 1
Screen
Image
Channel Power
14.05 dBm/ 35.9 MHz
Power Spectral Density
-61.50 dBm/Hz
MSG
STATUS

Product	VDSL2 Security Firewall		
Test Item	Peak Power Output		
Test Mode	Transmit		
Date of Test	2013/07/31	Test Site	SR7

IEEE802.11n40MHz(ANT 0+1)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
3	2422	16.51	30	Pass
6	2437	16.60	30	Pass
9	2452	16.38	30	Pass

Note: Measure Level =Reading value + cable loss

Product	VDSL2 Security Firewall		
Test Item	Peak Power Output		
Test Mode	Transmit		
Date of Test	2013/05/02	Test Site	SR7

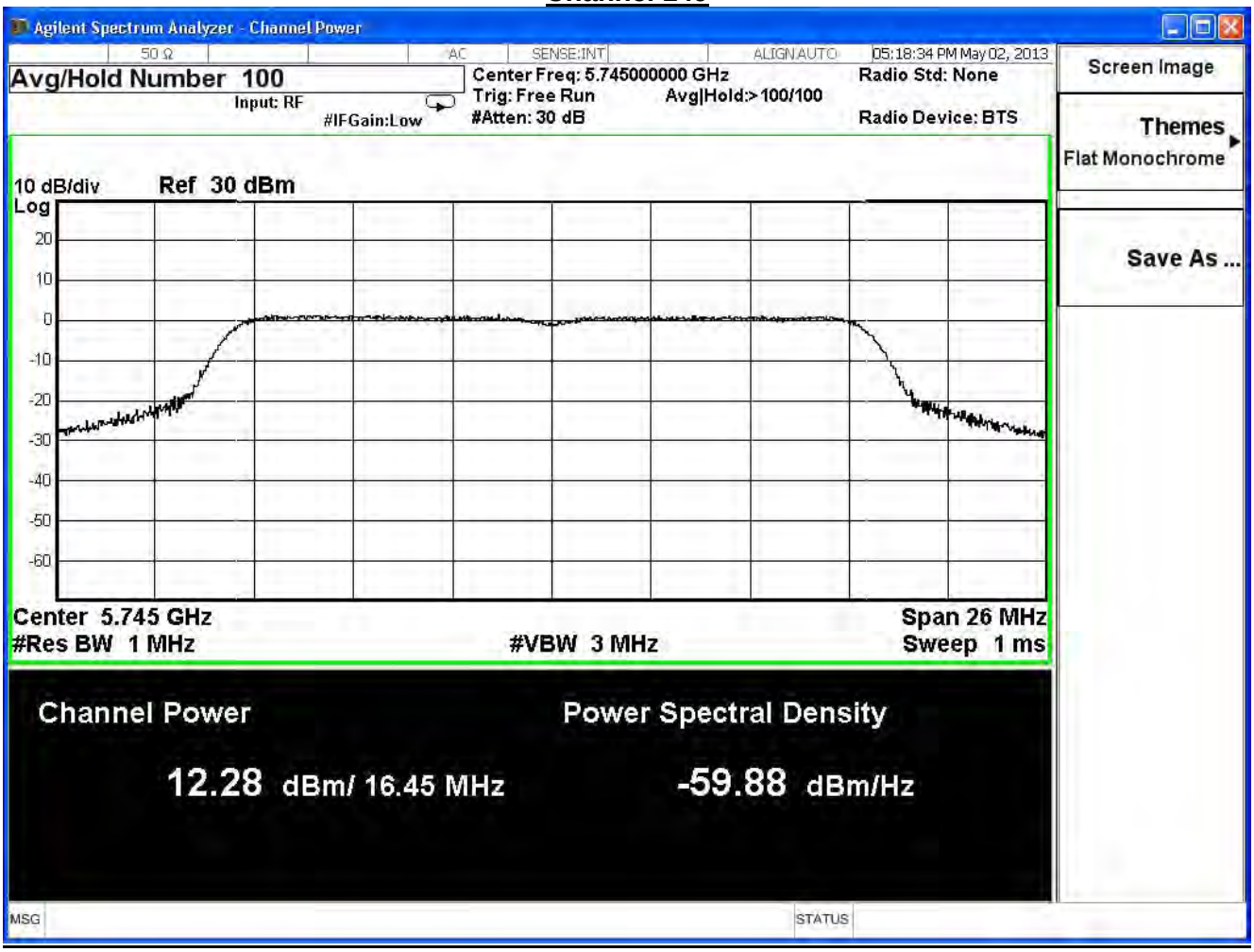
IEEE 802.11a				
Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
149	5745	12.28	30	Pass
157	5785	13.27	30	Pass
165	5825	13.60	30	Pass

The worst emission of data rate is 6Mbps.

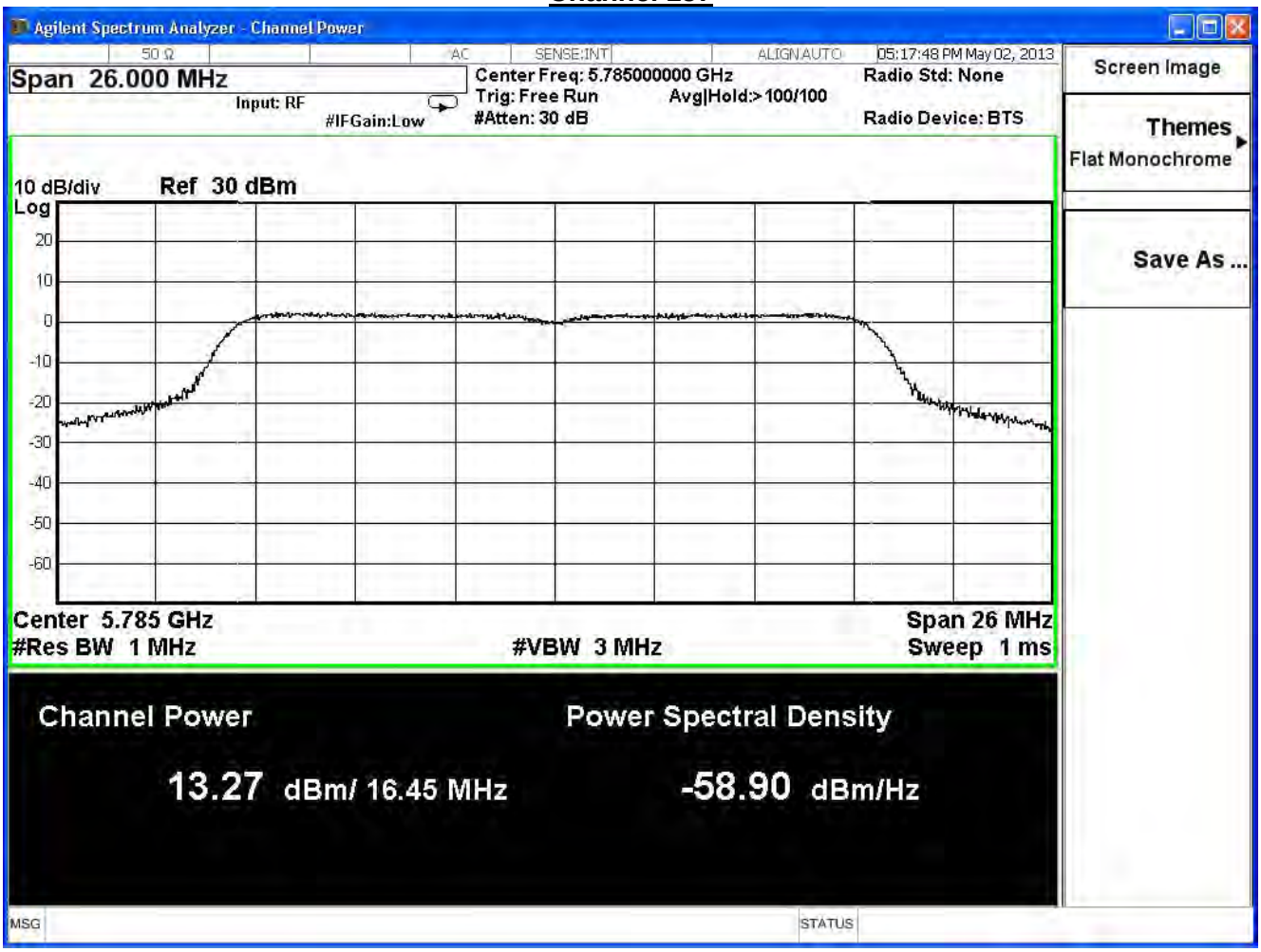
Peak Power Output Value(dBm)									
Channel No.	Frequency (MHz)	Data Rate (Mbps)							Required Limit
		6	12	18	24	36	48	54	
149	5745	12.28	--	--	--	--	--	--	30dBm
157	5785	13.27	13.26	13.25	13.24	13.23	13.22	13.21	30dBm
165	5825	13.60	--	--	--	--	--	--	30dBm

Note: Measure Level =Reading value + cable loss

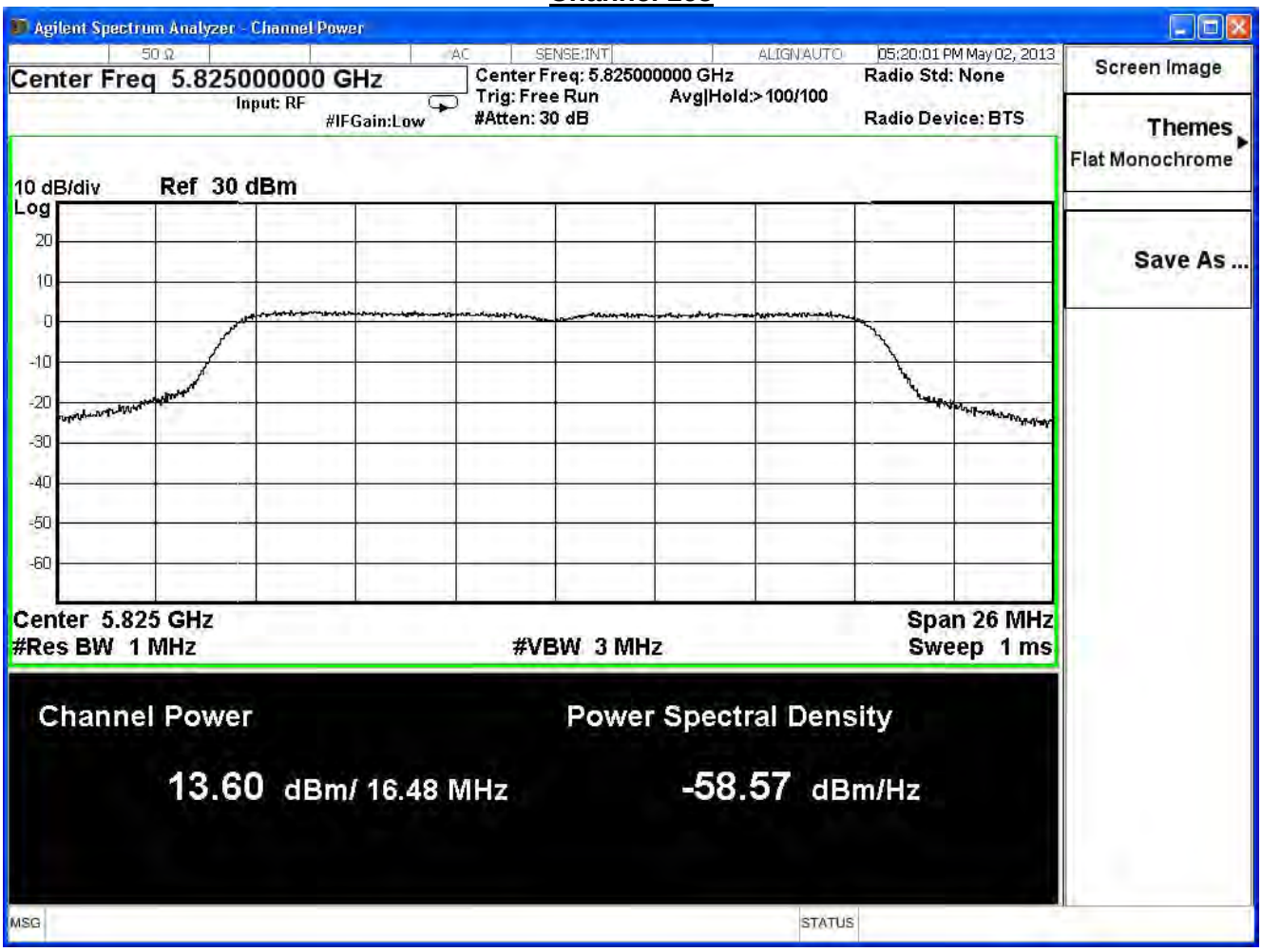
Channel 149


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
05:18:34 PM May 02, 2013
Avg/Hold Number 100
Input: RF
#IFGain:Low
Center Freq: 5.745000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Screen Image
Themes
Flat Monochrome
Save As ...
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.745 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
12.28 dBm/ 16.45 MHz
Power Spectral Density
-59.88 dBm/Hz
MSG
STATUS

Channel 157


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
05:17:48 PM May 02, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 5.785000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Screen Image
Themes
Flat Monochrome
Save As ...
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.785 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
13.27 dBm/ 16.45 MHz
Power Spectral Density
-58.90 dBm/Hz
MSG
STATUS

Channel 165


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
05:20:01 PM May 02, 2013
Center Freq 5.825000000 GHz
Input: RF
#IFGain:Low
Center Freq: 5.825000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Screen Image
Themes
Flat Monochrome
Save As ...
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.825 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
13.60 dBm/ 16.48 MHz
Power Spectral Density
-58.57 dBm/Hz
MSG
STATUS

Product	VDSL2 Security Firewall		
Test Item	Peak Power Output		
Test Mode	Transmit		
Date of Test	2013/05/02	Test Site	SR7

IEEE 802.11n20MHz (ANT 0)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
149	5745	16.70	28.87	Pass
157	5785	17.47	28.87	Pass
165	5825	17.61	28.87	Pass

The worst emission of data rate is 13 Mbps.

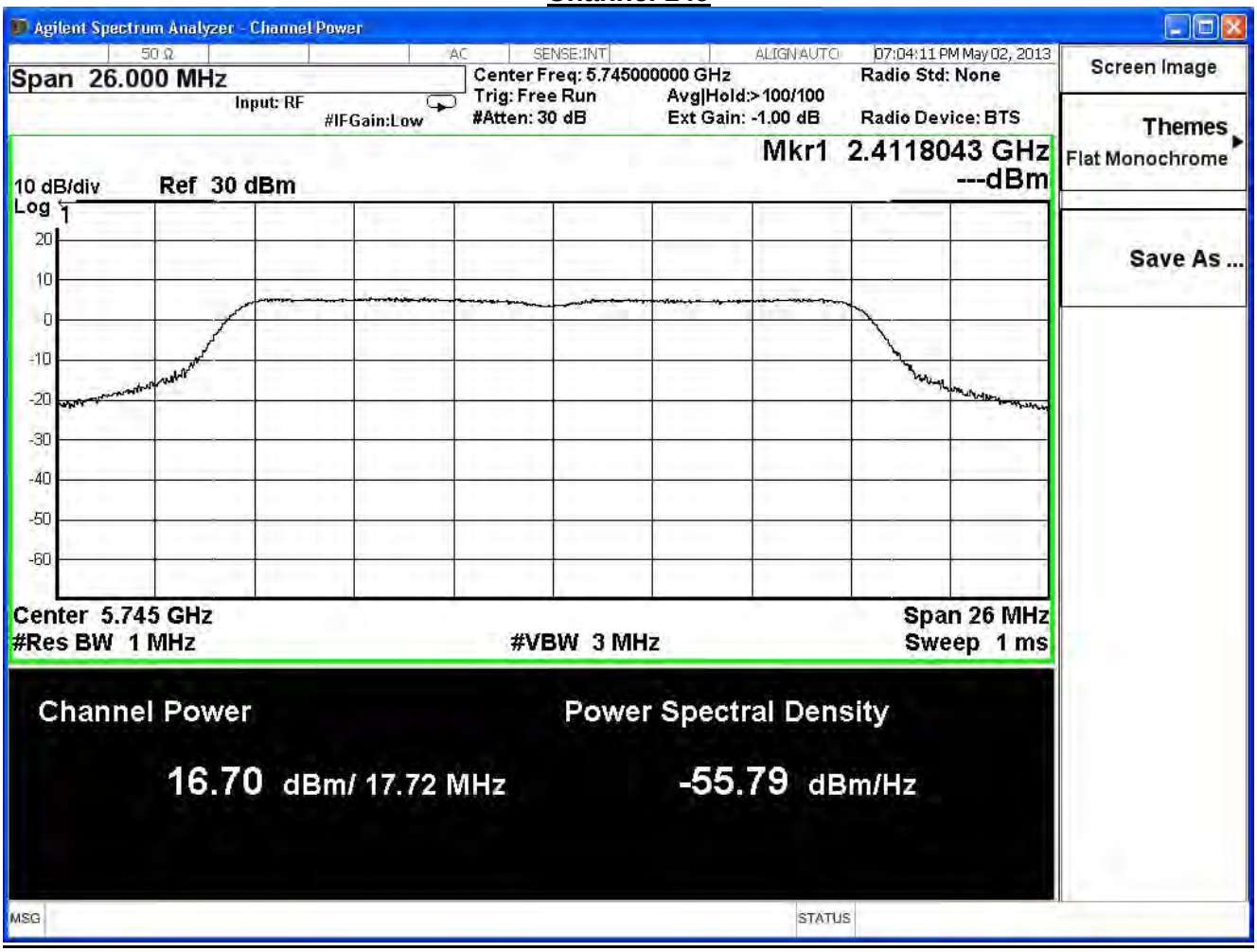
Peak Power Output (dBm)										
MCS Index		8	9	10	11	12	13	14	15	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13	26	39	52	78	104	117	130	
149	5745	16.70	--	--	--	--	--	--	--	28.87dBm
157	5785	17.47	17.46	17.45	17.43	17.42	17.41	17.40	17.39	28.87dBm
165	5825	17.61	--	--	--	--	--	--	--	28.87dBm

Note: Measure Level =Reading value + cable loss

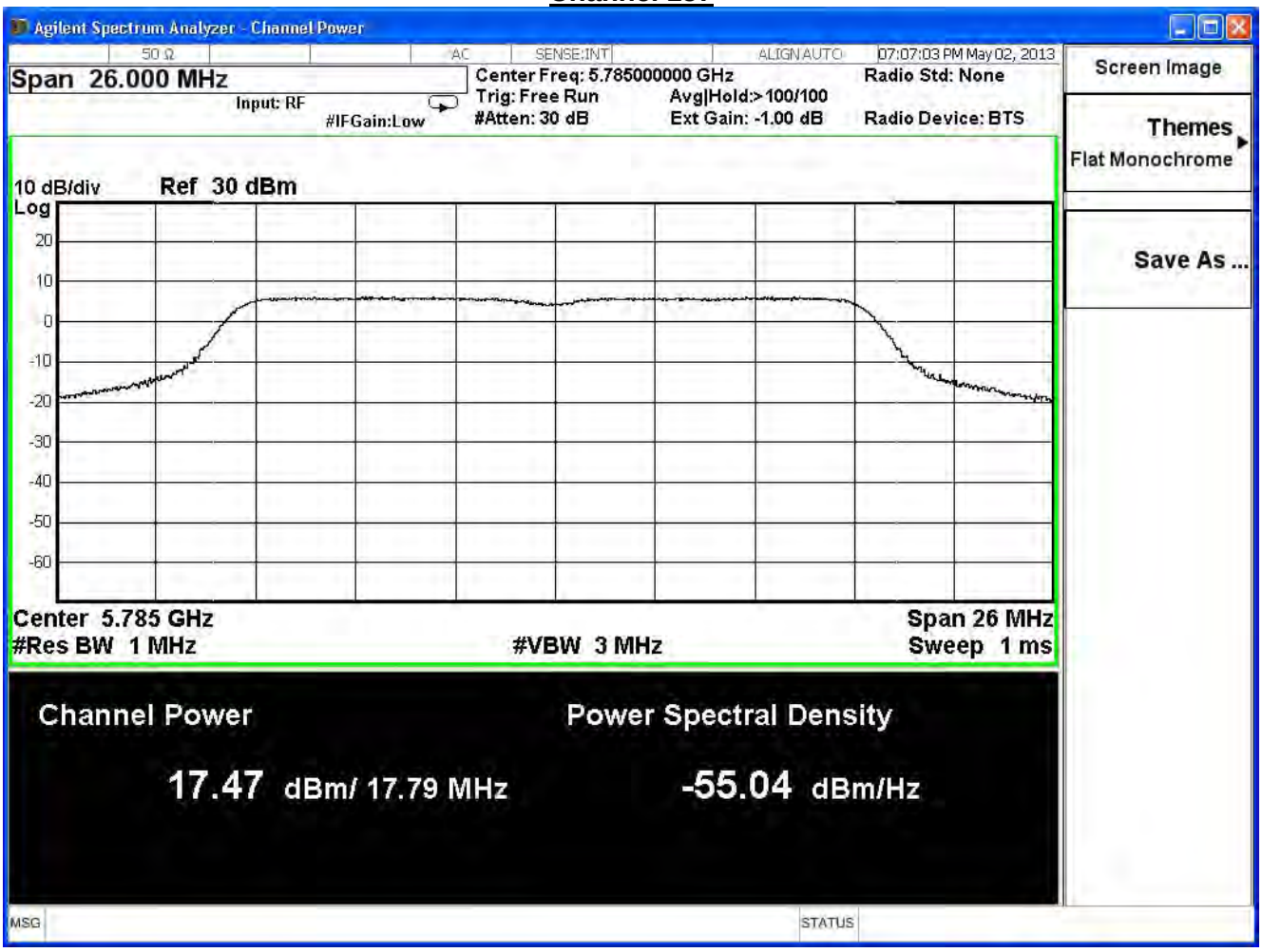
5.8G Directional Antenna = 10log(Ant N) + Ant Gain = 3.01dBm + 4.12dBi = 7.13dBi

Limit = 30dBm - (7.13dBi - 6dB) = 28.87dBm

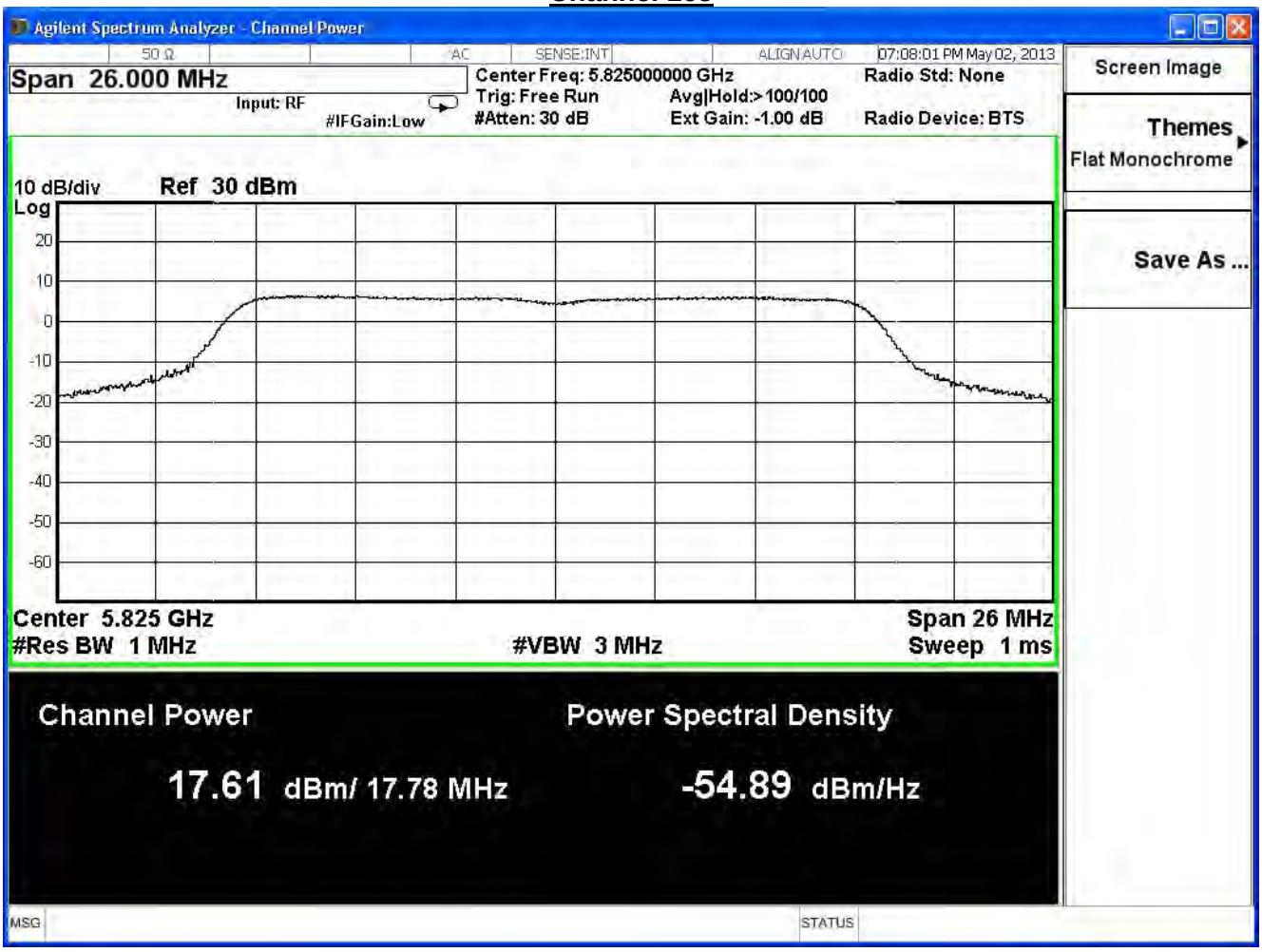
Channel 149


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:04:11 PM May 02, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 5.745000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.00 dB
Radio Std: None
Radio Device: BTS
Mkr1 2.4118043 GHz
---dBm
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.745 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
16.70 dBm/ 17.72 MHz
Power Spectral Density
-55.79 dBm/Hz
MSG
STATUS
Screen Image
Themes
Flat Monochrome
Save As ...

Channel 157


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:07:03 PM May 02, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 5.785000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Ext Gain: -1.00 dB
Radio Std: None
Radio Device: BTS
Screen Image
Themes
Flat Monochrome
Save As ...
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.785 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
17.47 dBm/ 17.79 MHz
Power Spectral Density
-55.04 dBm/Hz
MSG
STATUS

Channel 165


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:08:01 PM May 02, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 5.825000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Ext Gain: -1.00 dB
Radio Std: None
Radio Device: BTS
Screen Image
Themes
Flat Monochrome
Save As ...
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.825 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
17.61 dBm/ 17.78 MHz
Power Spectral Density
-54.89 dBm/Hz
MSG
STATUS

Product	VDSL2 Security Firewall		
Test Item	Peak Power Output		
Test Mode	Transmit		
Date of Test	2013/05/02	Test Site	SR7

IEEE 802.11n20MHz (ANT 1)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
149	5745	17.41	28.87	Pass
157	5785	17.85	28.87	Pass
165	5825	18.49	28.87	Pass

The worst emission of data rate is 13 Mbps.

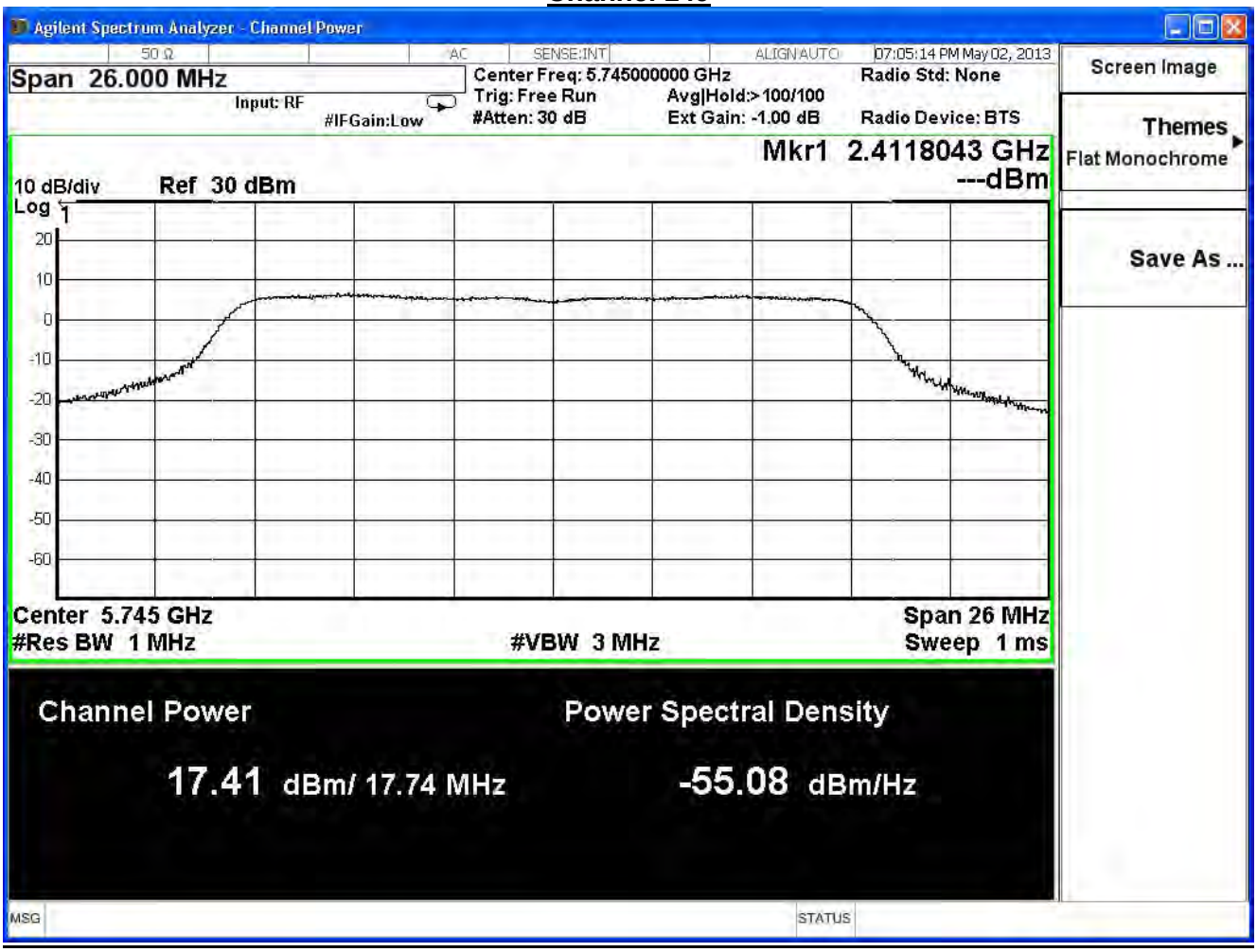
Peak Power Output (dBm)										
MCS Index		8	9	10	11	12	13	14	15	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		13	26	39	52	78	104	117	130	
149	5745	17.41	--	--	--	--	--	--	--	28.87dBm
157	5785	17.85	17.84	17.83	17.82	17.81	17.80	17.79	17.78	28.87dBm
165	5825	18.49	--	--	--	--	--	--	--	28.87dBm

Note: Measure Level =Reading value + cable loss

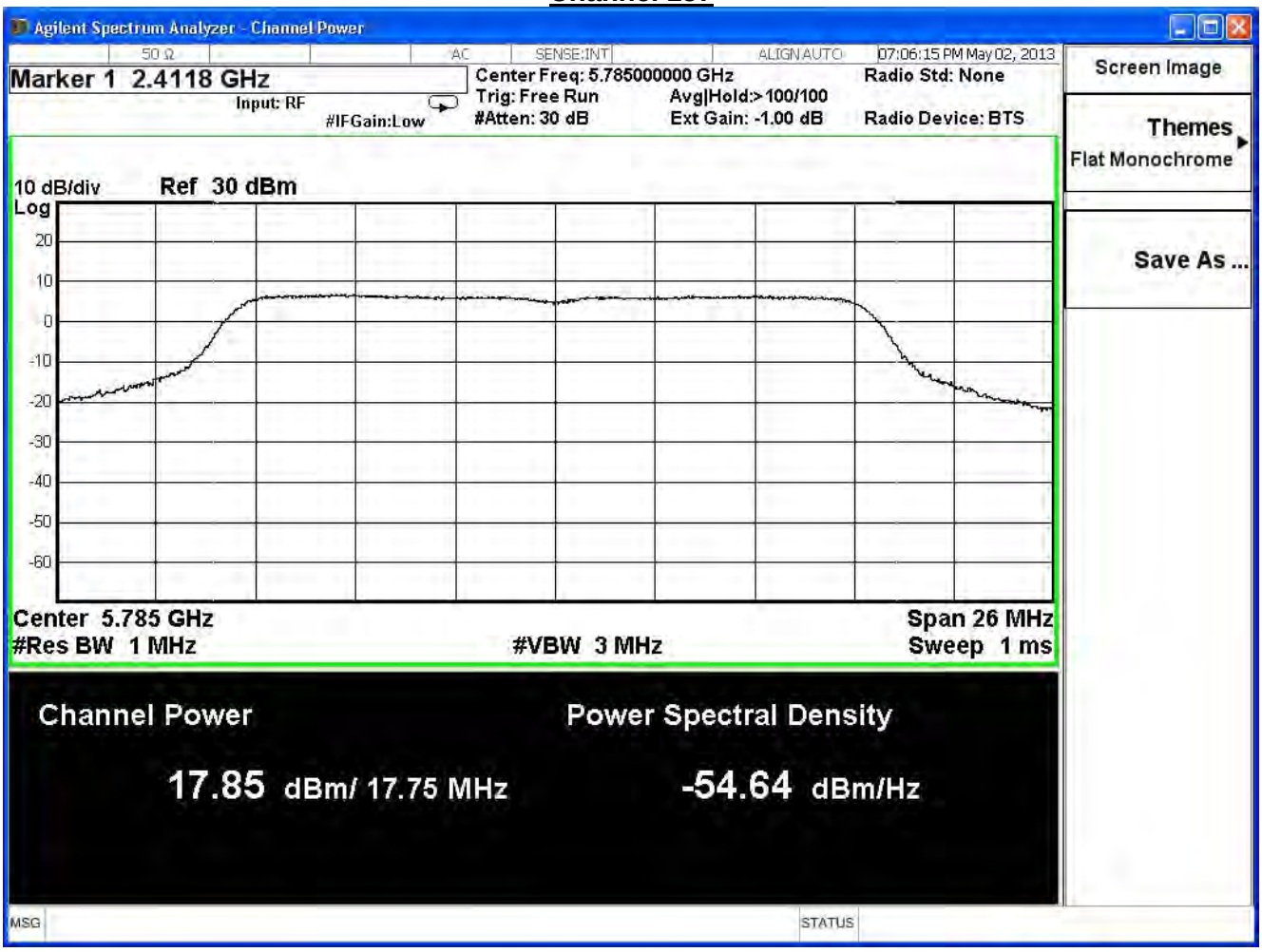
5.8G Directional Antenna = 10log(Ant N) + Ant Gain = 3.01dBm + 4.12dBi = 7.13dBi

Limit = 30dBm - (7.13dBi - 6dB) = 28.87dBm

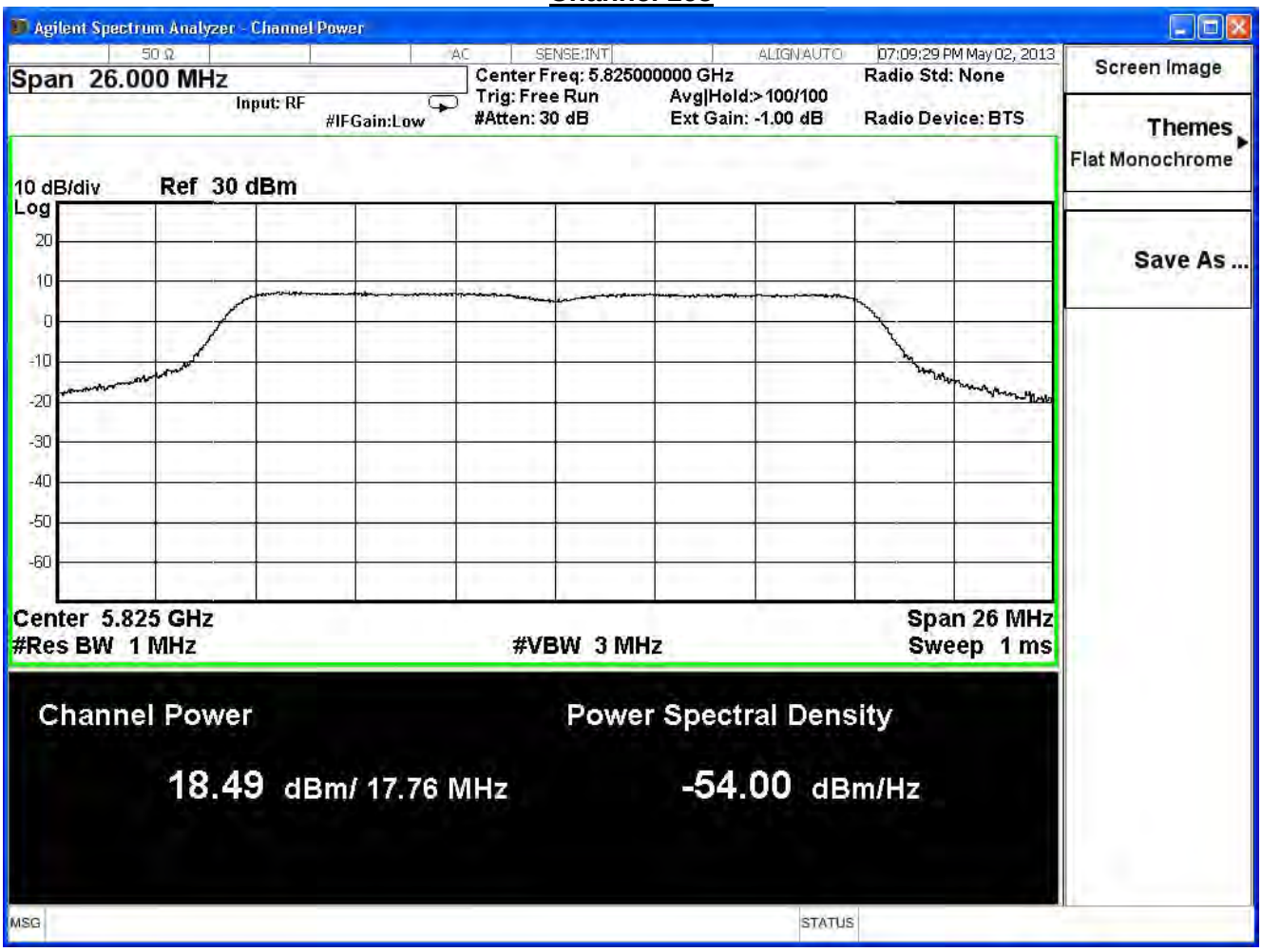
Channel 149


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:05:14 PM May 02, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 5.745000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.00 dB
Radio Std: None
Radio Device: BTS
Mkr1 2.4118043 GHz
---dBm
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.745 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
17.41 dBm/ 17.74 MHz
Power Spectral Density
-55.08 dBm/Hz
MSG
STATUS
Screen Image
Themes
Flat Monochrome
Save As ...

Channel 157


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:06:15 PM May 02, 2013
Marker 1 2.4118 GHz
Input: RF
#IFGain:Low
Center Freq: 5.785000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.00 dB
Radio Std: None
Radio Device: BTS
Screen Image
Themes
Flat Monochrome
Save As ...
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.785 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
17.85 dBm/ 17.75 MHz
Power Spectral Density
-54.64 dBm/Hz
MSG
STATUS

Channel 165


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:09:29 PM May 02, 2013
Span 26.000 MHz
Input: RF
#IFGain:Low
Center Freq: 5.825000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.00 dB
Radio Std: None
Radio Device: BTS
Screen Image
Themes
Flat Monochrome
Save As ...
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.825 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 26 MHz
Sweep 1 ms
Channel Power
18.49 dBm/ 17.76 MHz
Power Spectral Density
-54.00 dBm/Hz
MSG
STATUS

Product	VDSL2 Security Firewall		
Test Item	Peak Power Output		
Test Mode	Transmit		
Date of Test	2013/05/02	Test Site	SR7

IEEE 802.11n20MHz (ANT 0+1)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
149	5745	20.08	28.87	Pass
157	5785	20.67	28.87	Pass
165	5825	21.08	28.87	Pass

Note: Measure Level =Reading value + cable loss

5.8G Directional Antenna = 10log(Ant N) + Ant Gain = 3.01dBm + 4.12dBi = 7.13dBi

Limit = 30dBm - (7.13dBi - 6dB) = 28.87dBm

Product	VDSL2 Security Firewall		
Test Item	Peak Power Output		
Test Mode	Transmit		
Date of Test	2013/05/02	Test Site	SR7

IEEE802.11n40MHz(ANT 0)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
151	5755	15.62	28.87	Pass
159	5795	16.33	28.87	Pass

The worst emission of data rate is 27Mbps

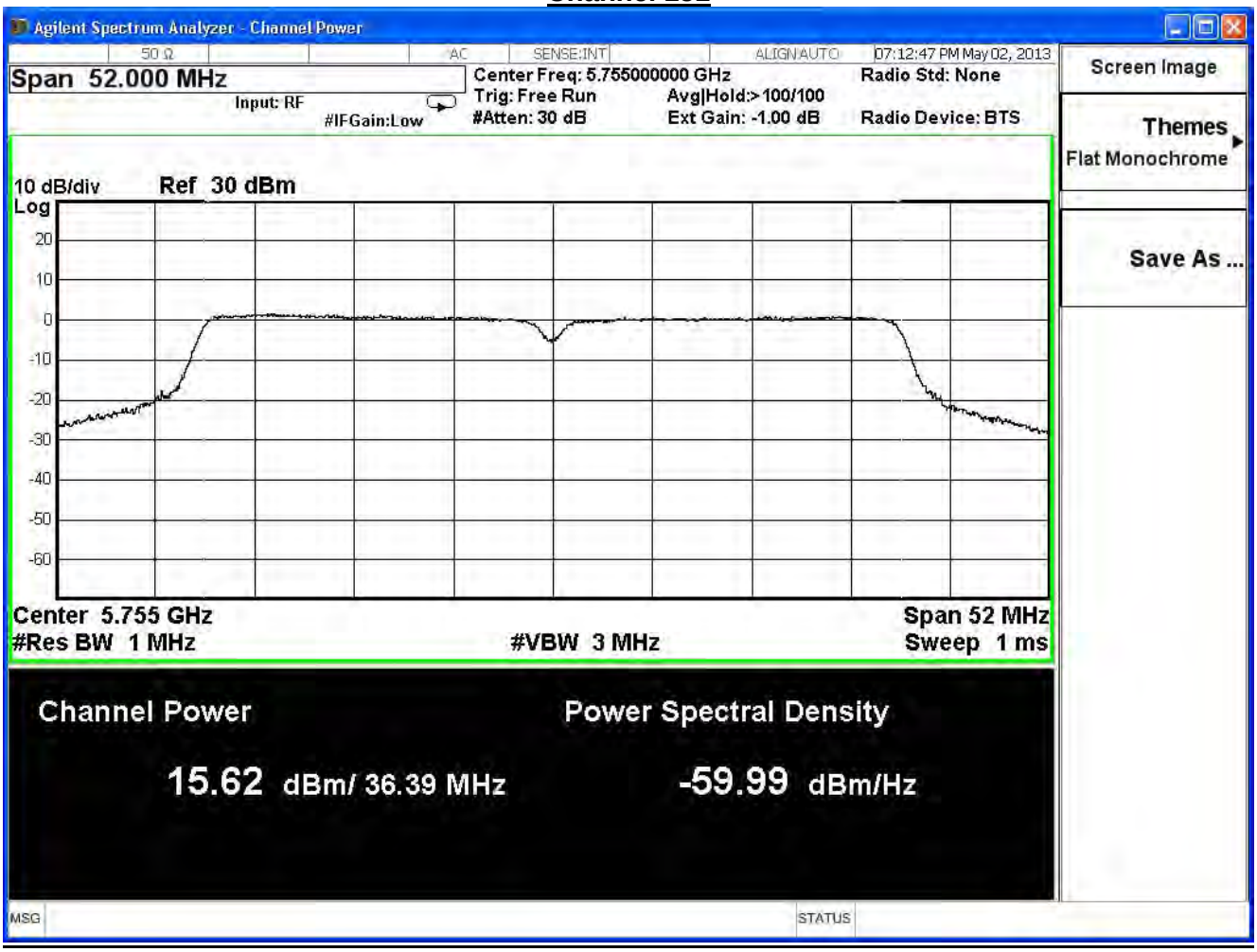
Peak Power Output (dBm)										
MCS Index		8	9	10	11	12	13	14	15	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		27	54	81	108	162	216	243	270	
151	5755	15.62	15.61	15.60	15.59	15.58	15.57	15.56	15.55	28.87dBm
159	5795	16.33	--	--	--	--	--	--	--	28.87dBm

Note: Measure Level =Reading value + cable loss

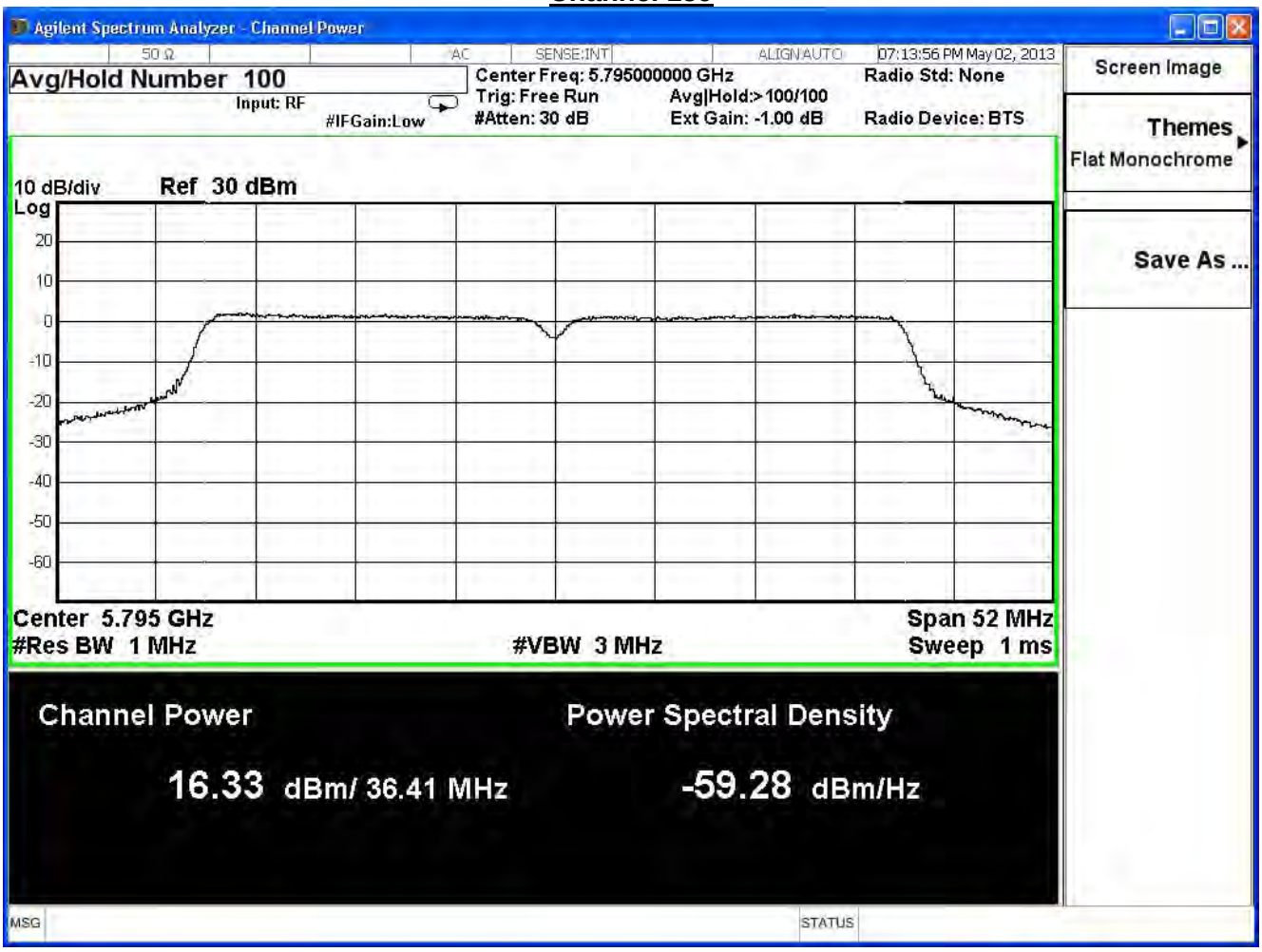
5.8G Directional Antenna = 10log(Ant N) + Ant Gain = 3.01dBm + 4.12dBi = 7.13dBi

Limit = 30dBm - (7.13dBi - 6dB) = 28.87dBm

Channel 151


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:12:47 PM May 02, 2013
Span 52.000 MHz
Input: RF
#IFGain:Low
Center Freq: 5.755000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.00 dB
Radio Std: None
Radio Device: BTS
Screen Image
Themes
Flat Monochrome
Save As ...
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.755 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 52 MHz
Sweep 1 ms
Channel Power
15.62 dBm/ 36.39 MHz
Power Spectral Density
-59.99 dBm/Hz
MSG
STATUS

Channel 159


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:13:56 PM May 02, 2013
Avg/Hold Number 100
Input: RF
#IFGain:Low
Center Freq: 5.795000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.00 dB
Radio Std: None
Radio Device: BTS
Screen Image
Themes
Flat Monochrome
Save As ...
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.795 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 52 MHz
Sweep 1 ms
Channel Power
16.33 dBm/ 36.41 MHz
Power Spectral Density
-59.28 dBm/Hz
MSG
STATUS

Product	VDSL2 Security Firewall		
Test Item	Peak Power Output		
Test Mode	Transmit		
Date of Test	2013/05/02	Test Site	SR7

IEEE802.11n40MHz(ANT 1)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
151	5755	15.68	28.87	Pass
159	5795	16.92	28.87	Pass

The worst emission of data rate is 27Mbps

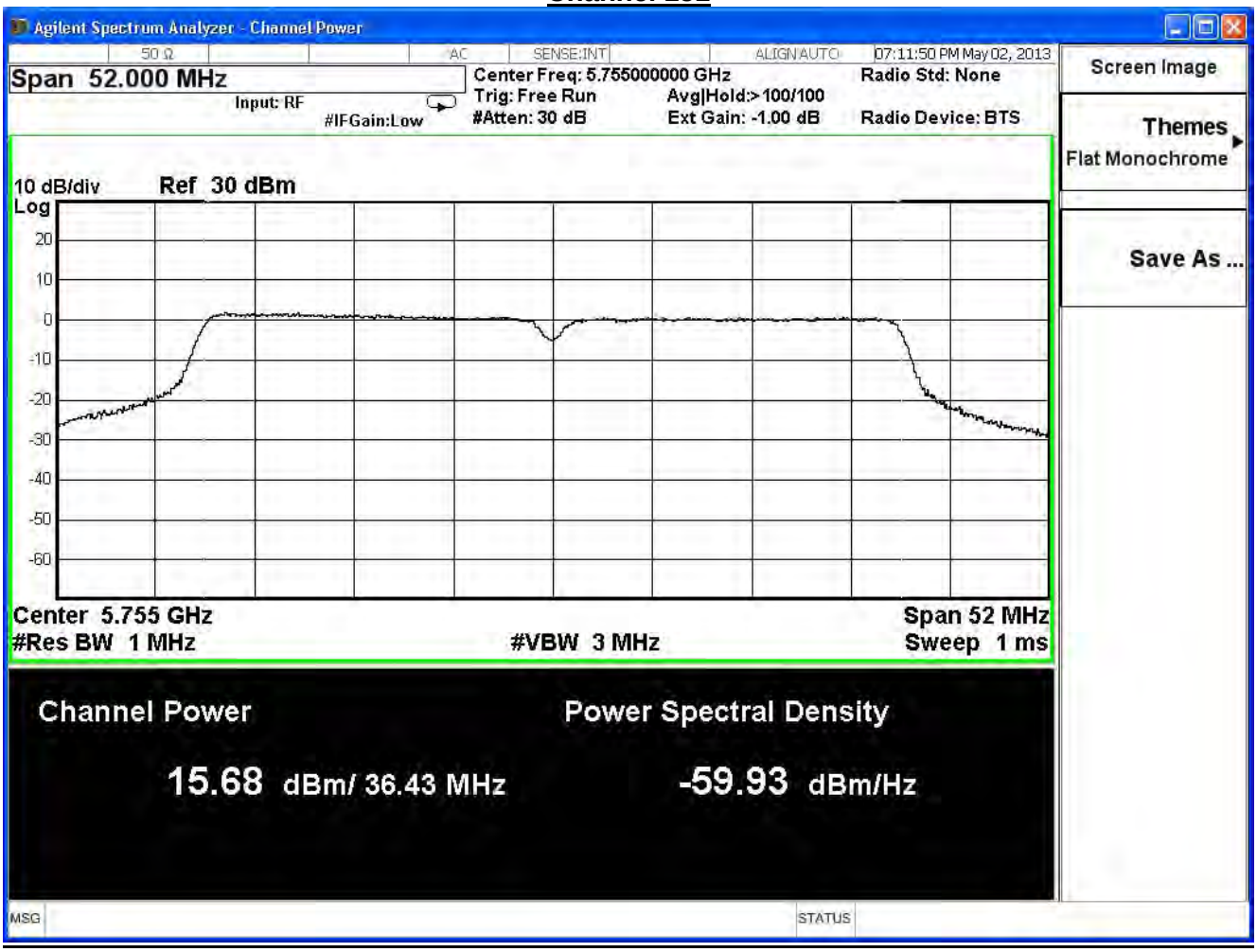
Peak Power Output (dBm)										
MCS Index		8	9	10	11	12	13	14	15	Required Limit
Channel No	Frequency (MHz)	Data Rate								
		27	54	81	108	162	216	243	270	
151	5755	15.68	15.67	15.65	15.64	15.63	15.62	15.61	15.60	28.87dBm
159	5795	16.92	--	--	--	--	--	--	--	28.87dBm

Note: Measure Level =Reading value + cable loss

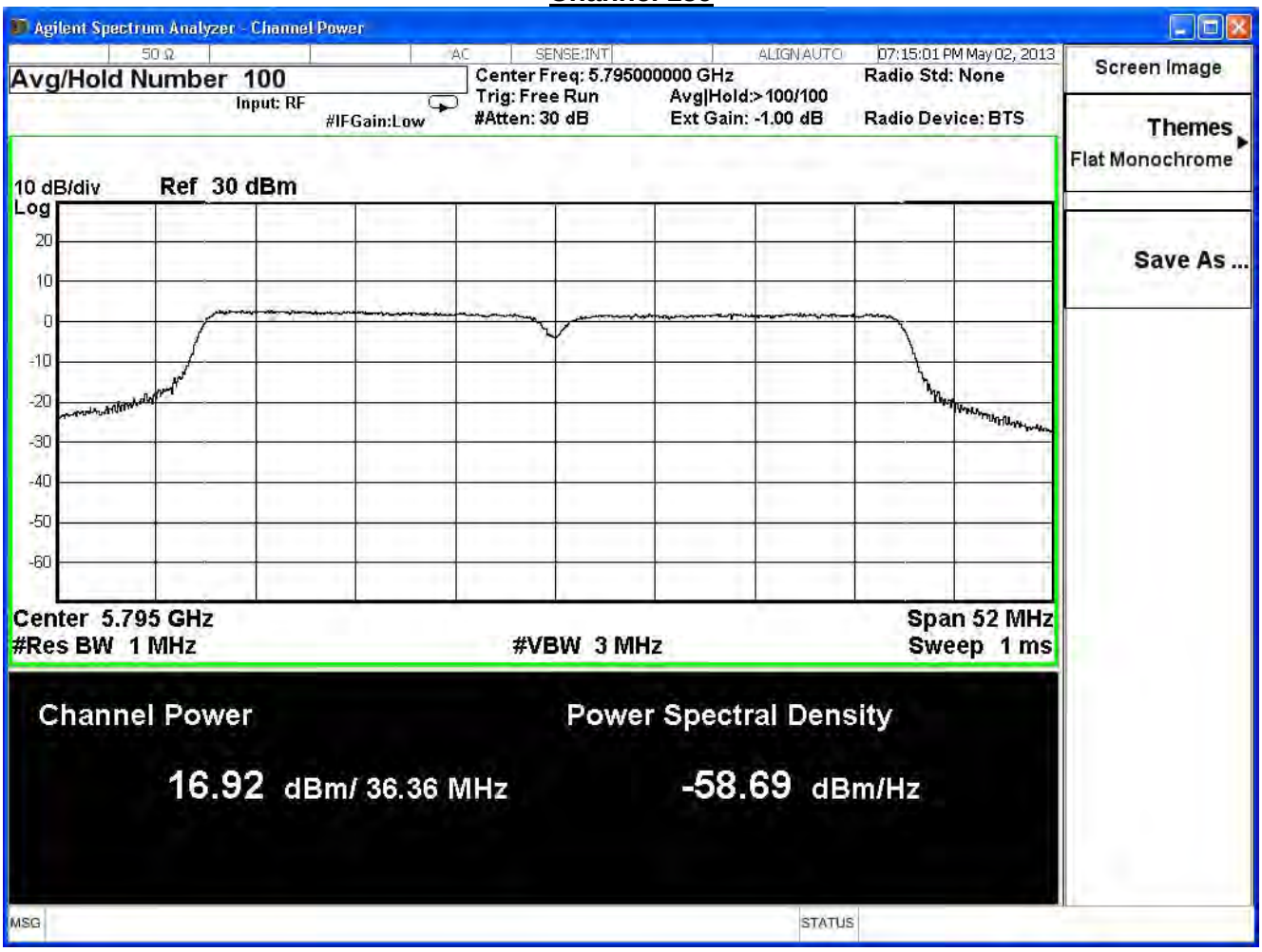
5.8G Directional Antenna = 10log(Ant N) + Ant Gain = 3.01dBm + 4.12dBi = 7.13dBi

Limit = 30dBm - (7.13dBi - 6dB) = 28.87dBm

Channel 151


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:11:50 PM May 02, 2013
Span 52.000 MHz
Input: RF
#IFGain:Low
Center Freq: 5.755000000 GHz
Trig: Free Run
Avg|Hold:>100/100
#Atten: 30 dB
Ext Gain: -1.00 dB
Radio Std: None
Radio Device: BTS
Screen Image
Themes
Flat Monochrome
Save As ...
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.755 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 52 MHz
Sweep 1 ms
Channel Power
15.68 dBm/ 36.43 MHz
Power Spectral Density
-59.93 dBm/Hz
MSG
STATUS

Channel 159


Agilent Spectrum Analyzer - Channel Power
50 Ω
AC
SENSE:INT
ALIGN AUTO
07:15:01 PM May 02, 2013
Avg/Hold Number 100
Input: RF
#IFGain:Low
Center Freq: 5.795000000 GHz
Trig: Free Run
#Atten: 30 dB
Avg|Hold:>100/100
Ext Gain: -1.00 dB
Radio Std: None
Radio Device: BTS
Screen Image
Themes
Flat Monochrome
Save As ...
10 dB/div
Log
Ref 30 dBm
20
10
0
-10
-20
-30
-40
-50
-60
Center 5.795 GHz
#Res BW 1 MHz
#VBW 3 MHz
Span 52 MHz
Sweep 1 ms
Channel Power
16.92 dBm/ 36.36 MHz
Power Spectral Density
-58.69 dBm/Hz
MSG
STATUS

Product	VDSL2 Security Firewall		
Test Item	Peak Power Output		
Test Mode	Transmit		
Date of Test	2013/05/02	Test Site	SR7

IEEE802.11n40MHz(ANT 0+1)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
151	5755	18.88	28.87	Pass
159	5795	19.65	28.87	Pass

Note: Measure Level =Reading value + cable loss

5.8G Directional Antenna = 10log(Ant N) + Ant Gain = 3.01dBm + 4.12dBi = 7.13dBi

Limit = 30dBm - (7.13dBi - 6dB) = 28.87dBm

4. Radiated Emission

4.1. Test Equipment

The following test equipments are used during the test:

Radiated Emission / CB1 (For 2.4G)

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Bilog Antenna	SCHAFFNER	CBL6112B	2895(CB1)	2014/08/14
Double Ridged Guide Horn Antenna	Schwarzback	BBHA 9120	D743	2014/02/17
Pre-Amplifier	MITEQ	AMF-4D-005180-24-10P	888003	2014/06/09
Pre-Amplifier	QuieTek	AP-025C	CHM-0706049	2014/02/19
Spectrum Analyzer	Agilent	E4440A	MY46187335	2014/01/27
k Type Cable	Huber Suhner	Sucoflex 102	25623/2	2014/02/21

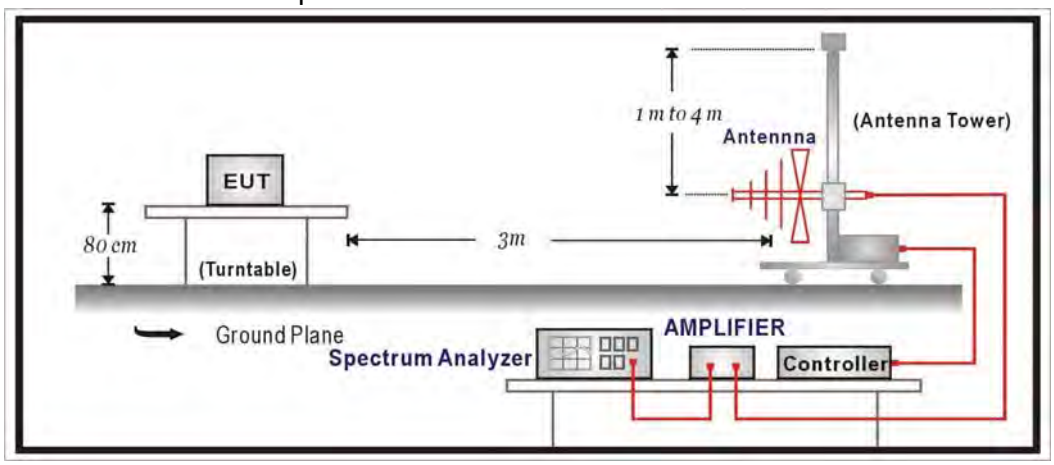
Radiated Emission / CB1 (For 5.8G)

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Bilog Antenna	SCHAFFNER	CBL6112B	2895	2013/08/14
Double Ridged Guide Horn Antenna	Schwarzback	BBHA 9120	D743	2014/02/17
Pre-Amplifier	MITEQ	AMF-4D-005180-24-10P	888003	2013/12/02
Pre-Amplifier	QuieTek	AP-025C	CHM-0706049	2014/02/19
Spectrum Analyzer	Agilent	E4440A	MY46187335	2014/01/27
k Type Cable	Huber Suhner	Sucoflex 102	25623/2	2014/02/21

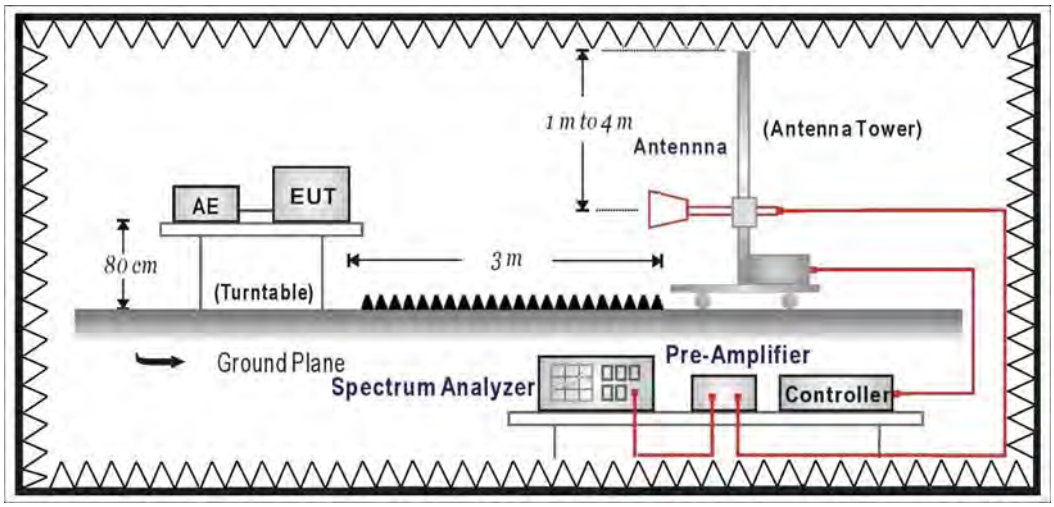
Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	uV/m	dBuV/m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks: E field strength (dBuV/m) = 20 log E field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements.
The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.4: 2009 on radiated measurement.
On any frequency or frequencies below or equal to 1000 MHz, the limits shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit. The bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

4.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

4.6. Uncertainty

The measurement uncertainty

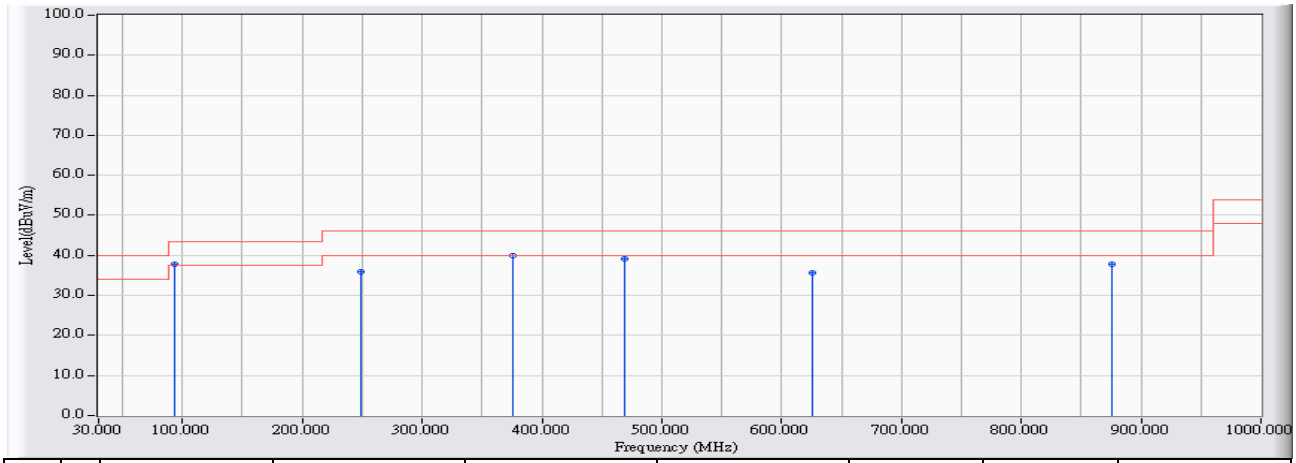
30MHz～1GHz as ±3.43dB

1GHz～26.5Ghz as ±3.65dB

4.7. Test Result

30MHz-1GHz Spurious

Site : CB1	**Time : 2013/08/19 - 17:21**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11b_2437MHz**

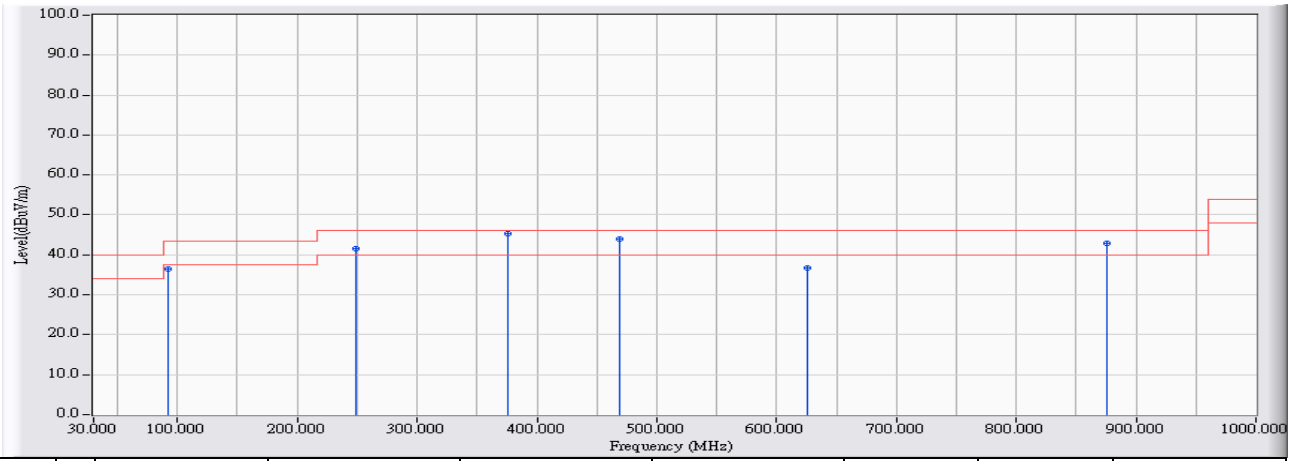


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	94.020	-24.592	62.513	37.921	-5.579	43.500	QUASIPEAK
2		249.220	-20.610	56.426	35.817	-10.183	46.000	QUASIPEAK
3		375.320	-18.037	57.953	39.916	-6.084	46.000	QUASIPEAK
4		468.440	-16.078	55.277	39.199	-6.801	46.000	QUASIPEAK
5		625.580	-15.154	50.788	35.634	-10.366	46.000	QUASIPEAK
6		875.840	-13.065	50.878	37.813	-8.187	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/08/19 - 17:26**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11b_2437MHz**

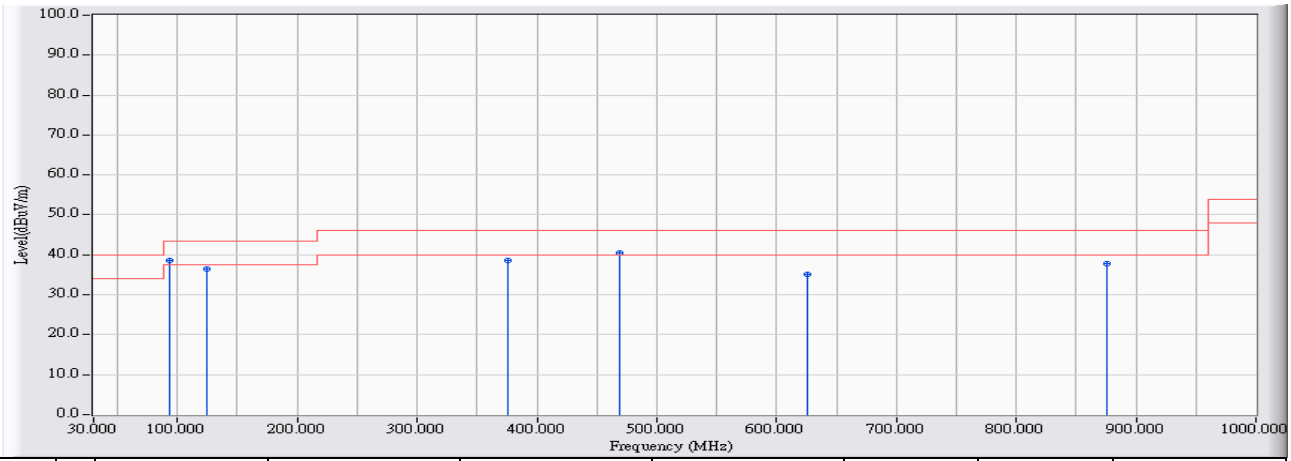


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		92.080	-25.051	61.586	36.535	-6.965	43.500	QUASIPEAK
2		249.220	-20.610	62.281	41.672	-4.328	46.000	QUASIPEAK
3	*	375.320	-18.037	63.464	45.427	-0.573	46.000	QUASIPEAK
4		468.440	-16.078	60.062	43.984	-2.016	46.000	QUASIPEAK
5		625.580	-15.154	51.959	36.805	-9.195	46.000	QUASIPEAK
6		875.840	-13.065	55.879	42.814	-3.186	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/08/19 - 17:32**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11g_2437MHz**

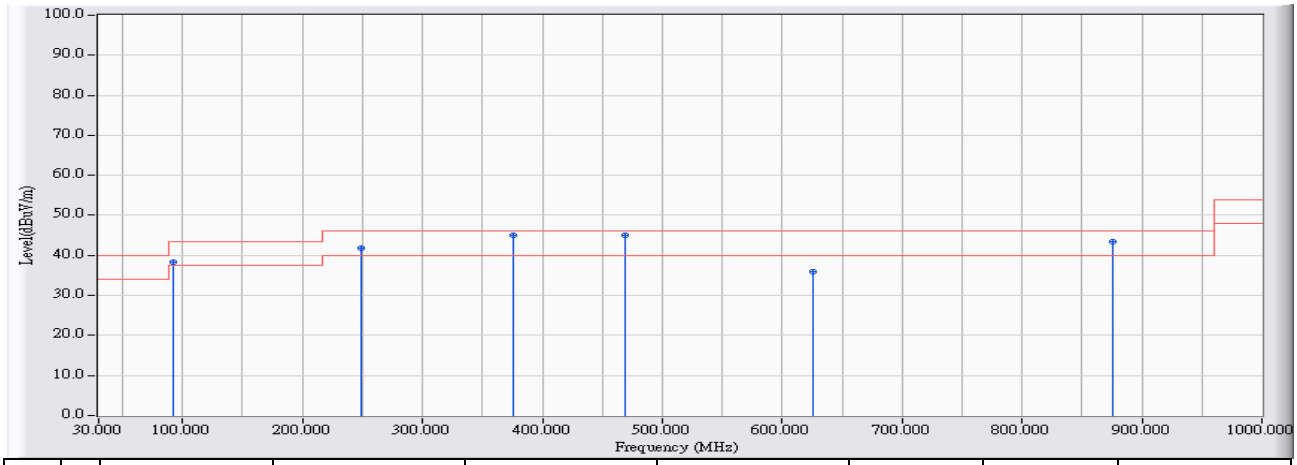


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	94.020	-24.592	63.147	38.555	-4.945	43.500	QUASIPEAK
2		125.060	-22.348	58.789	36.441	-7.059	43.500	QUASIPEAK
3		375.320	-18.037	56.704	38.667	-7.333	46.000	QUASIPEAK
4		468.440	-16.078	56.637	40.559	-5.441	46.000	QUASIPEAK
5		625.580	-15.154	50.343	35.189	-10.811	46.000	QUASIPEAK
6		875.840	-13.065	50.854	37.789	-8.211	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/08/19 - 17:37**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11g_2437MHz**

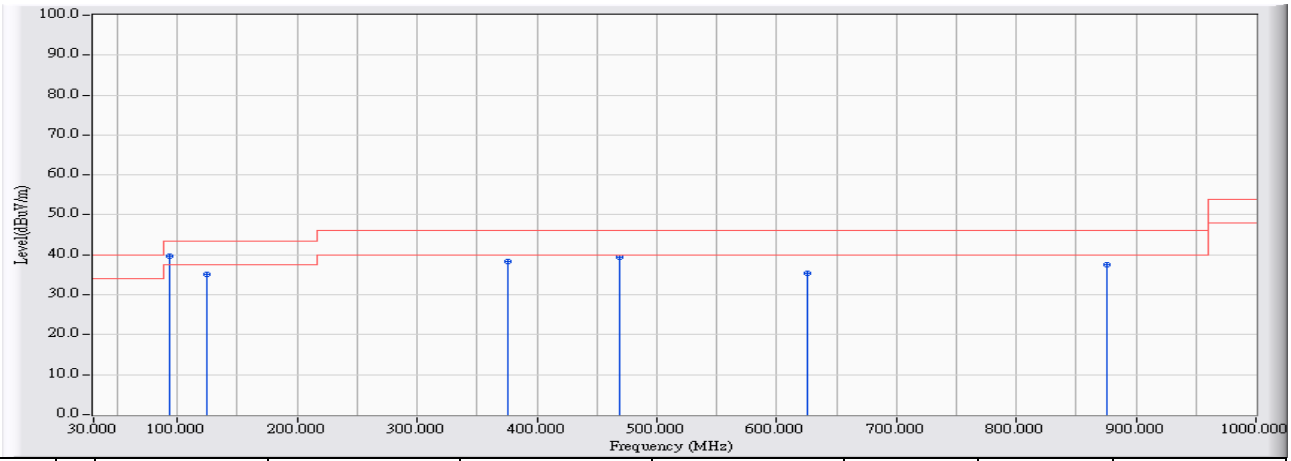


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		92.080	-25.051	63.440	38.389	-5.111	43.500	QUASIPEAK
2		249.220	-20.610	62.460	41.851	-4.149	46.000	QUASIPEAK
3	*	375.320	-18.037	63.197	45.160	-0.840	46.000	QUASIPEAK
4		468.440	-16.078	61.195	45.117	-0.883	46.000	QUASIPEAK
5		625.580	-15.154	51.124	35.970	-10.030	46.000	QUASIPEAK
6		875.840	-13.065	56.378	43.313	-2.687	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/08/19 - 17:43**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n20MHz_2437MHz**

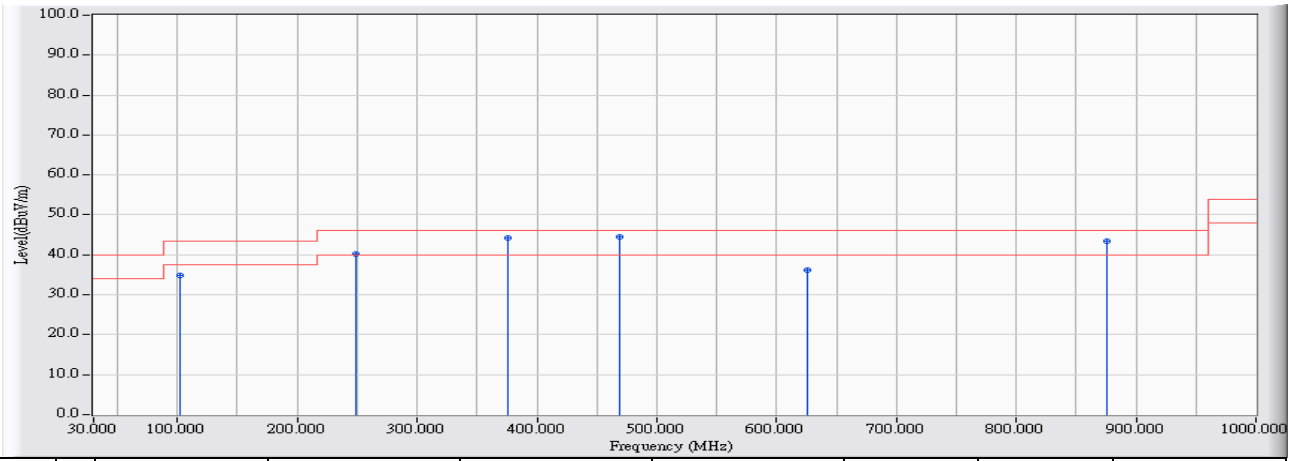


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	94.020	-24.592	64.190	39.598	-3.902	43.500	QUASIPEAK
2		125.060	-22.348	57.464	35.116	-8.384	43.500	QUASIPEAK
3		375.320	-18.037	56.249	38.212	-7.788	46.000	QUASIPEAK
4		468.440	-16.078	55.444	39.366	-6.634	46.000	QUASIPEAK
5		625.580	-15.154	50.533	35.379	-10.621	46.000	QUASIPEAK
6		875.840	-13.065	50.645	37.580	-8.420	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/08/19 - 17:48**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n20MHz_2437MHz**

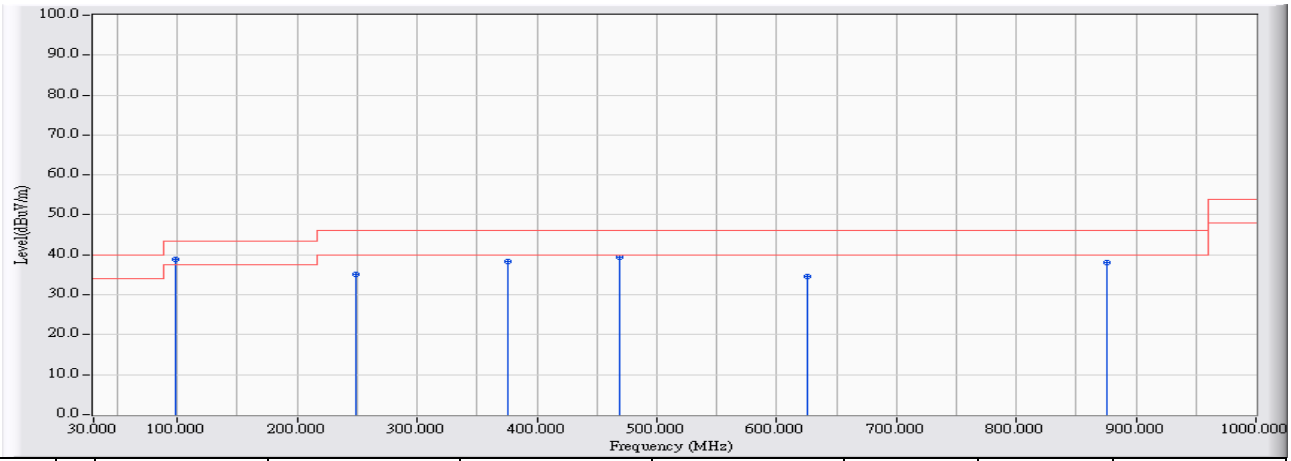


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		101.780	-23.088	57.820	34.732	-8.768	43.500	QUASIPEAK
2		249.220	-20.610	60.758	40.149	-5.851	46.000	QUASIPEAK
3		375.320	-18.037	62.144	44.107	-1.893	46.000	QUASIPEAK
4	*	468.440	-16.078	60.465	44.387	-1.613	46.000	QUASIPEAK
5		625.580	-15.154	51.378	36.224	-9.776	46.000	QUASIPEAK
6		875.840	-13.065	56.442	43.377	-2.623	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/08/19 - 17:53**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n40MHz_2437MHz**

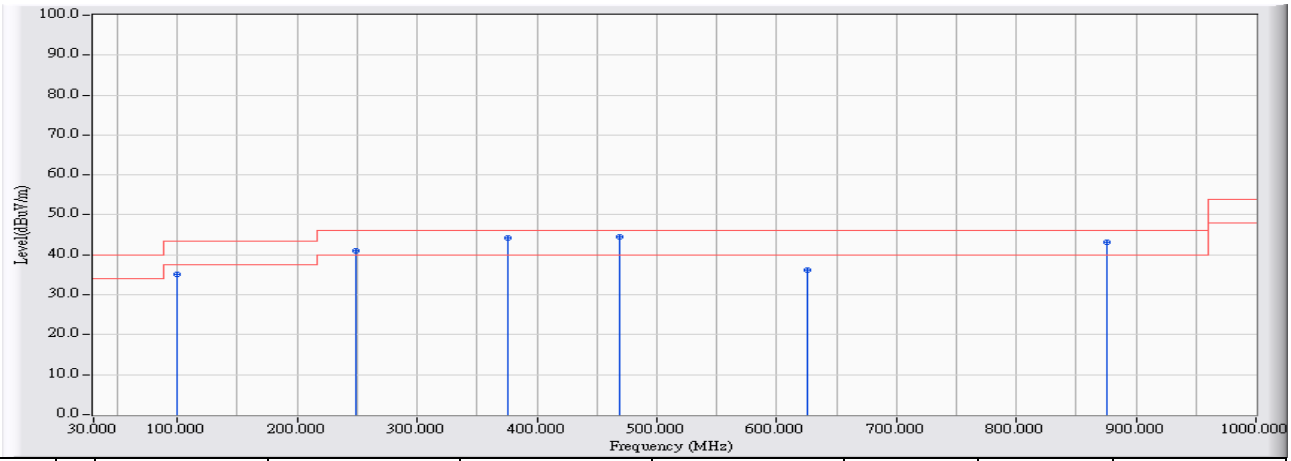


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	97.900	-23.673	62.509	38.835	-4.665	43.500	QUASIPEAK
2		249.220	-20.610	55.632	35.023	-10.977	46.000	QUASIPEAK
3		375.320	-18.037	56.470	38.433	-7.567	46.000	QUASIPEAK
4		468.440	-16.078	55.375	39.297	-6.703	46.000	QUASIPEAK
5		625.580	-15.154	49.619	34.465	-11.535	46.000	QUASIPEAK
6		875.840	-13.065	51.223	38.158	-7.842	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/08/19 - 17:59**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n40MHz_2437MHz**

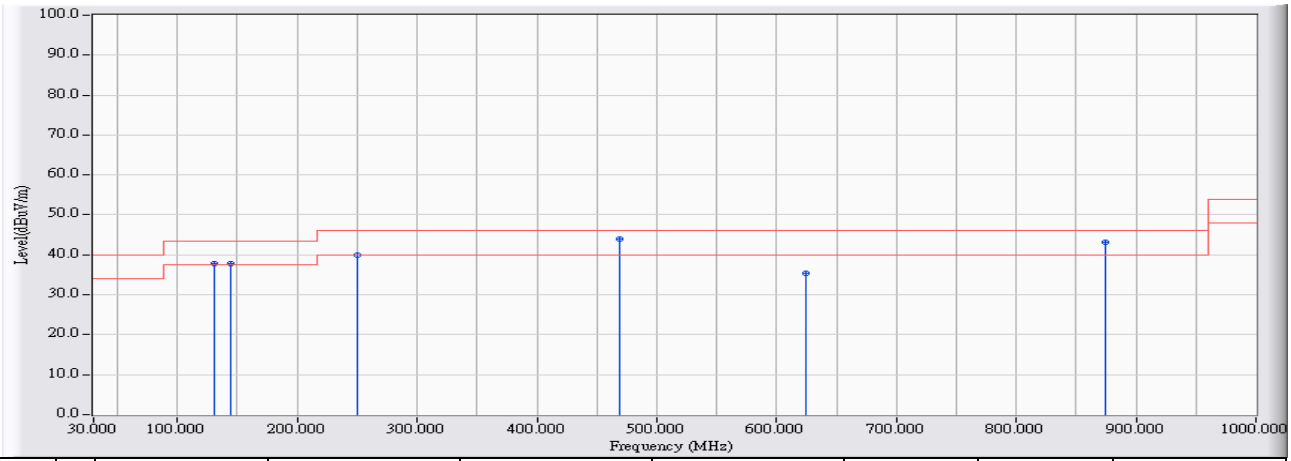


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		99.840	-23.214	58.255	35.041	-8.459	43.500	QUASIPEAK
2		249.220	-20.610	61.681	41.072	-4.928	46.000	QUASIPEAK
3		375.320	-18.037	62.329	44.292	-1.708	46.000	QUASIPEAK
4	*	468.440	-16.078	60.449	44.371	-1.629	46.000	QUASIPEAK
5		625.580	-15.154	51.224	36.070	-9.930	46.000	QUASIPEAK
6		875.840	-13.065	56.109	43.044	-2.956	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/09/04 - 10:23**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 2: Transmit (Adapter: HK-AX-120A200-US) 802.11b_2437MHz**

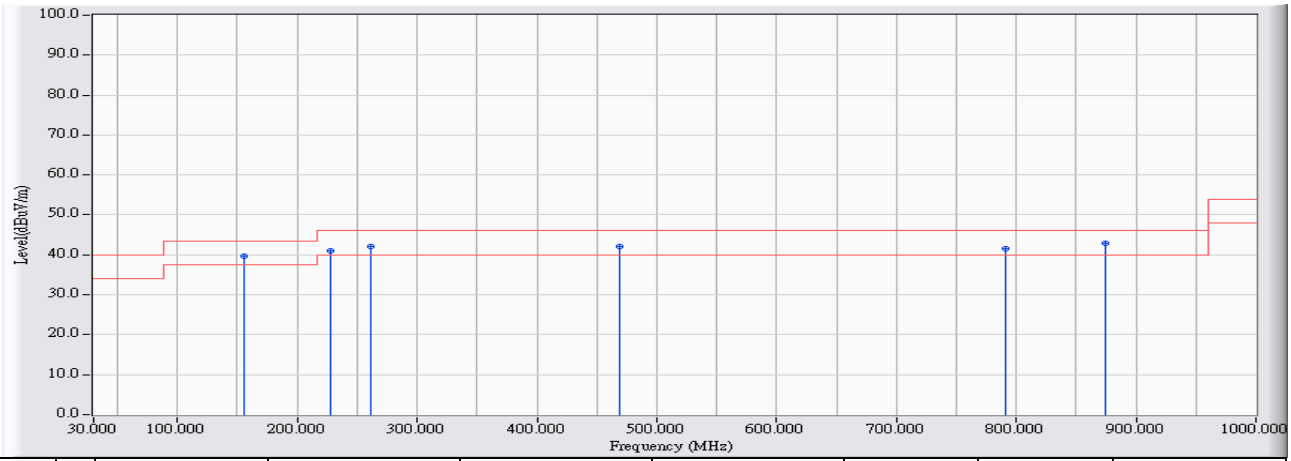


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		130.880	-22.541	60.448	37.907	-5.593	43.500	QUASIPEAK
2		144.460	-23.061	60.860	37.799	-5.701	43.500	QUASIPEAK
3		250.190	-20.538	60.422	39.884	-6.116	46.000	QUASIPEAK
4	*	468.440	-16.078	60.103	44.025	-1.975	46.000	QUASIPEAK
5		624.610	-15.161	50.652	35.491	-10.509	46.000	QUASIPEAK
6		874.870	-13.068	56.130	43.062	-2.938	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/09/04 - 10:29**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 2: Transmit (Adapter: HK-AX-120A200-US) 802.11b_2437MHz**

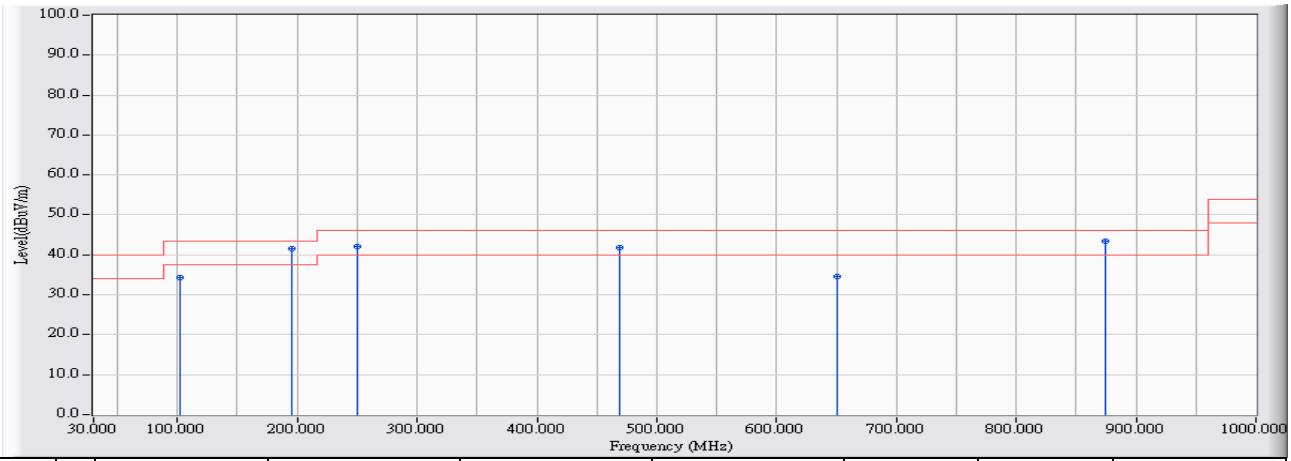


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		156.100	-23.629	63.417	39.788	-3.712	43.500	QUASIPEAK
2		227.880	-22.417	63.481	41.064	-4.936	46.000	QUASIPEAK
3		261.830	-20.399	62.524	42.125	-3.875	46.000	QUASIPEAK
4		468.440	-16.078	58.074	41.996	-4.004	46.000	QUASIPEAK
5		791.450	-13.419	54.873	41.454	-4.546	46.000	QUASIPEAK
6	*	874.870	-13.068	55.942	42.874	-3.126	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/09/04 - 10:34**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 2: Transmit (Adapter: HK-AX-120A200-US) 802.11g_2437MHz**

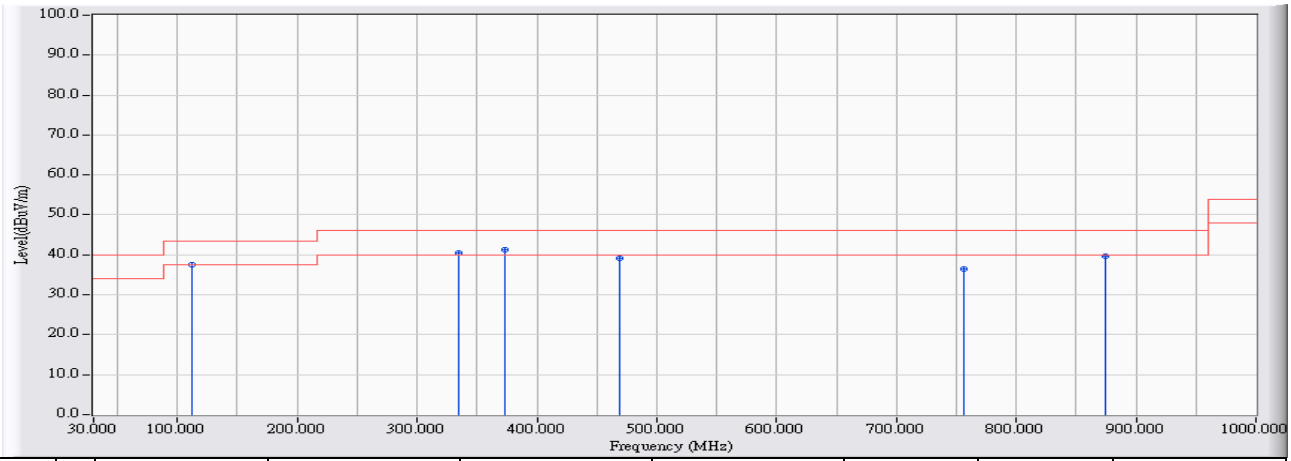


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		102.750	-23.040	57.313	34.273	-9.227	43.500	QUASIPEAK
2	*	194.900	-24.756	66.219	41.463	-2.037	43.500	QUASIPEAK
3		250.190	-20.538	62.527	41.989	-4.011	46.000	QUASIPEAK
4		468.440	-16.078	57.923	41.845	-4.155	46.000	QUASIPEAK
5		650.800	-14.992	49.590	34.598	-11.402	46.000	QUASIPEAK
6		874.870	-13.068	56.410	43.342	-2.658	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/09/04 - 10:39**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 2: Transmit (Adapter: HK-AX-120A200-US) 802.11g_2437MHz**

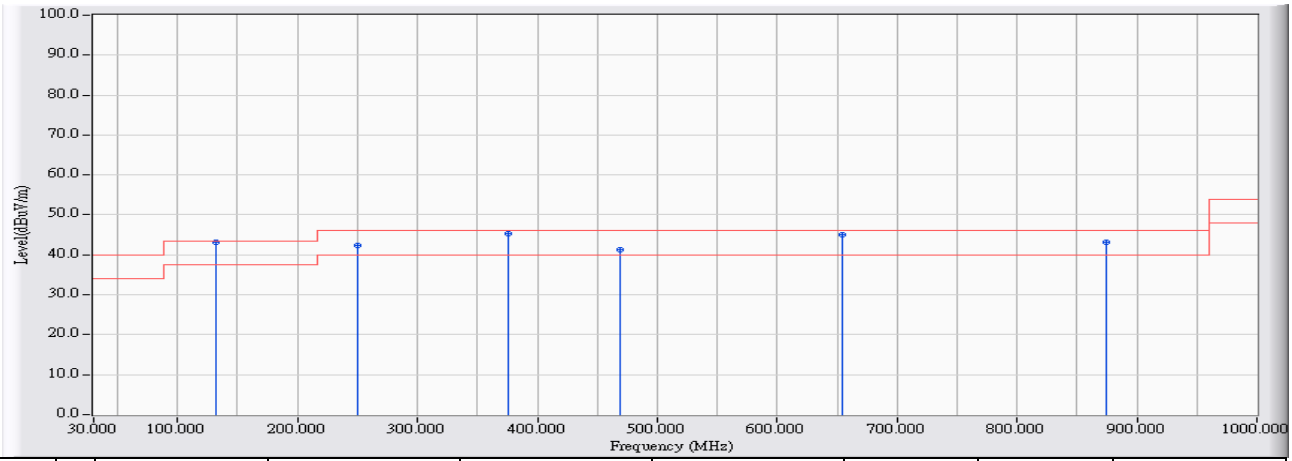


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		111.480	-22.604	60.224	37.619	-5.881	43.500	QUASIPEAK
2		334.580	-19.069	59.496	40.427	-5.573	46.000	QUASIPEAK
3	*	373.380	-18.087	59.405	41.319	-4.681	46.000	QUASIPEAK
4		468.440	-16.078	55.179	39.101	-6.899	46.000	QUASIPEAK
5		756.530	-13.899	50.243	36.344	-9.656	46.000	QUASIPEAK
6		874.870	-13.068	52.810	39.742	-6.258	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/09/04 - 10:44**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 2: Transmit (Adapter: HK-AX-120A200-US) 802.11n20MHz_2437MHz**

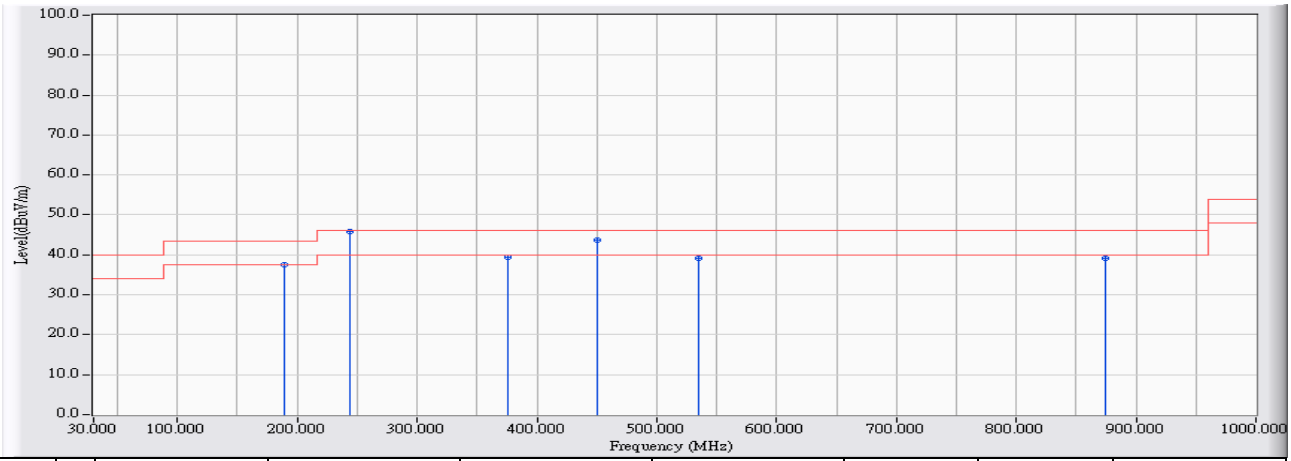


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	131.850	-22.574	65.800	43.227	-0.273	43.500	QUASIPEAK
2		250.190	-20.538	62.830	42.292	-3.708	46.000	QUASIPEAK
3		375.320	-18.037	63.305	45.268	-0.732	46.000	QUASIPEAK
4		468.440	-16.078	57.288	41.210	-4.790	46.000	QUASIPEAK
5		654.680	-14.967	60.118	45.150	-0.850	46.000	QUASIPEAK
6		874.870	-13.068	56.157	43.089	-2.911	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/09/04 - 10:48**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 2: Transmit (Adapter: HK-AX-120A200-US) 802.11n20MHz_2437MHz**

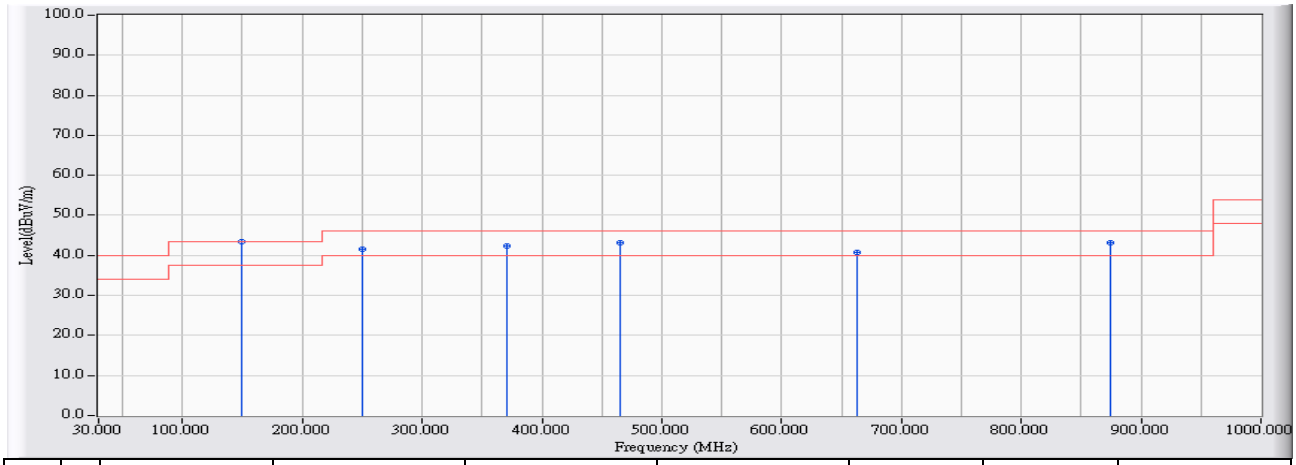


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		189.080	-24.727	62.356	37.629	-5.871	43.500	QUASIPEAK
2	*	244.370	-21.020	66.997	45.977	-0.023	46.000	QUASIPEAK
3		375.320	-18.037	57.458	39.421	-6.579	46.000	QUASIPEAK
4		450.010	-16.438	60.016	43.579	-2.421	46.000	QUASIPEAK
5		535.370	-15.412	54.472	39.060	-6.940	46.000	QUASIPEAK
6		874.870	-13.068	52.329	39.261	-6.739	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/09/04 - 10:48**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 2: Transmit (Adapter: HK-AX-120A200-US) 802.11n40MHz_2437MHz**

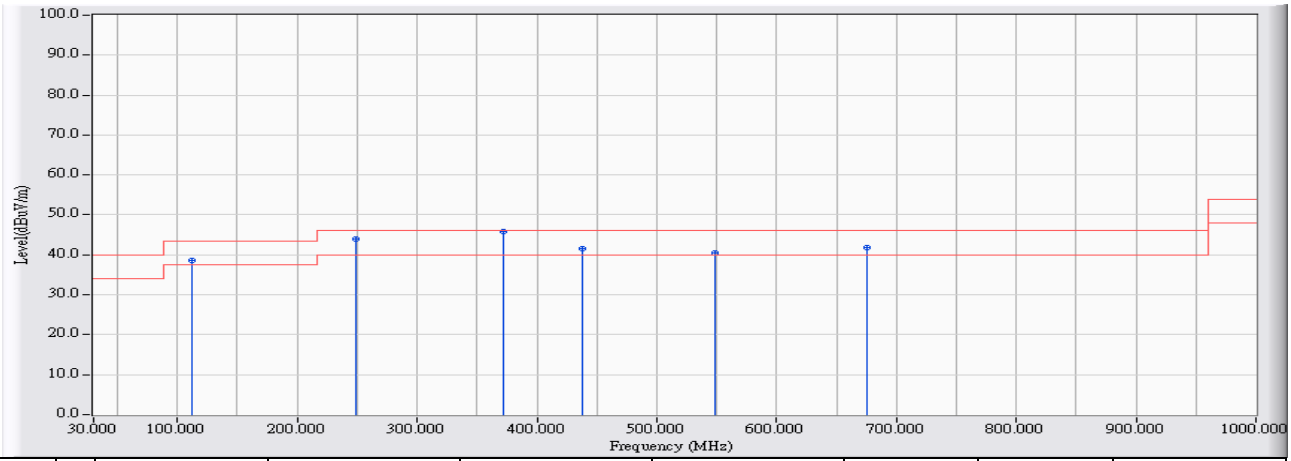


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	149.310	-23.298	66.734	43.436	-0.064	43.500	QUASIPEAK
2		250.190	-20.538	62.213	41.675	-4.325	46.000	QUASIPEAK
3		370.470	-18.160	60.581	42.421	-3.579	46.000	QUASIPEAK
4		465.530	-16.135	59.423	43.288	-2.712	46.000	QUASIPEAK
5		662.440	-14.917	55.604	40.686	-5.314	46.000	QUASIPEAK
6		874.870	-13.068	56.274	43.206	-2.794	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/09/04 - 10:49**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 2: Transmit (Adapter: HK-AX-120A200-US) 802.11n40MHz_2437MHz**

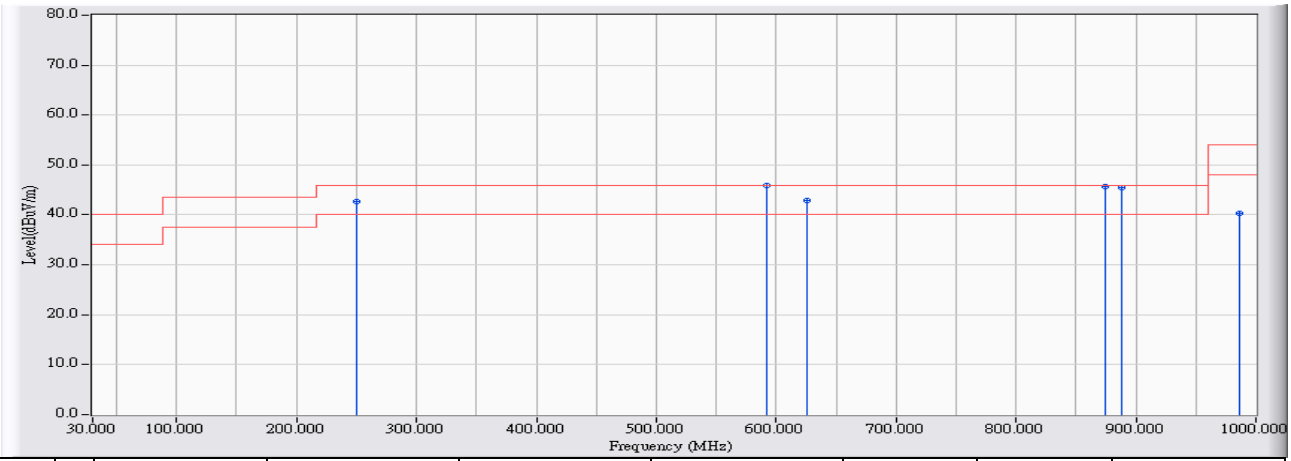


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		111.480	-22.604	61.332	38.727	-4.773	43.500	QUASIPEAK
2		248.250	-20.690	64.532	43.841	-2.159	46.000	QUASIPEAK
3	*	371.440	-18.136	64.004	45.868	-0.132	46.000	QUASIPEAK
4		437.400	-16.683	58.365	41.682	-4.318	46.000	QUASIPEAK
5		548.950	-15.392	55.832	40.440	-5.560	46.000	QUASIPEAK
6		675.050	-14.837	56.736	41.899	-4.101	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/11/20 - 16:37**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n20MHz_5785MHz**

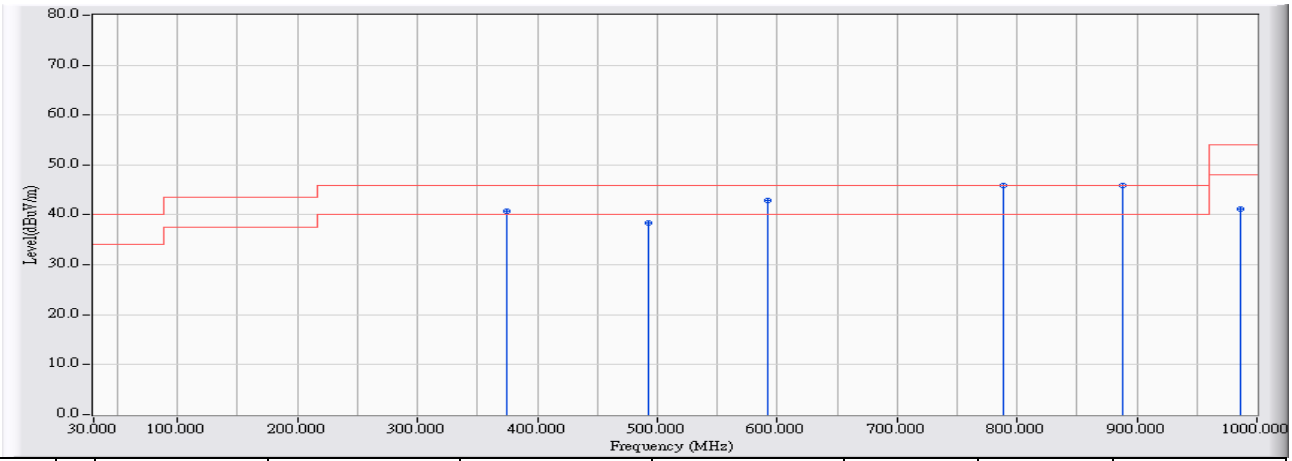


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		250.190	-20.538	63.225	42.687	-3.313	46.000	QUASIPEAK
2	*	591.630	-15.331	61.191	45.860	-0.140	46.000	QUASIPEAK
3		625.095	-15.158	58.081	42.923	-3.077	46.000	QUASIPEAK
4		874.870	-13.068	58.825	45.757	-0.243	46.000	QUASIPEAK
5		887.480	-13.028	58.479	45.451	-0.549	46.000	QUASIPEAK
6		986.420	-12.263	52.661	40.397	-13.603	54.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/11/20 - 16:42**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n20MHz_5785MHz**

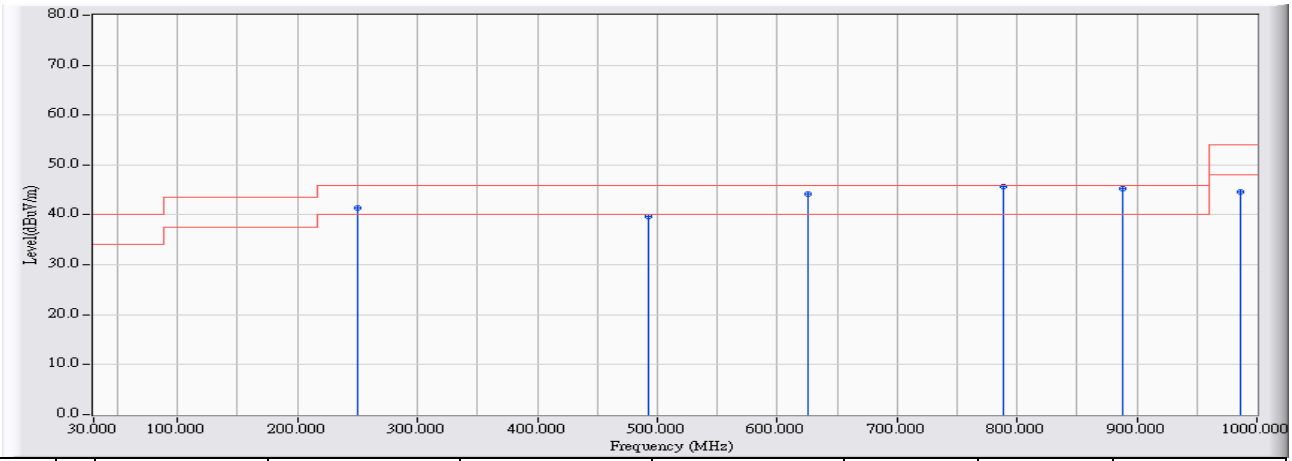


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		374.835	-18.049	58.853	40.803	-5.197	46.000	QUASIPEAK
2		493.175	-15.595	53.993	38.397	-7.603	46.000	QUASIPEAK
3		591.630	-15.331	58.173	42.842	-3.158	46.000	QUASIPEAK
4	*	789.025	-13.452	59.380	45.928	-0.072	46.000	QUASIPEAK
5		887.480	-13.028	58.860	45.832	-0.168	46.000	QUASIPEAK
6		986.420	-12.263	53.430	41.166	-12.834	54.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/11/20 - 16:47**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n40MHz_5795MHz**

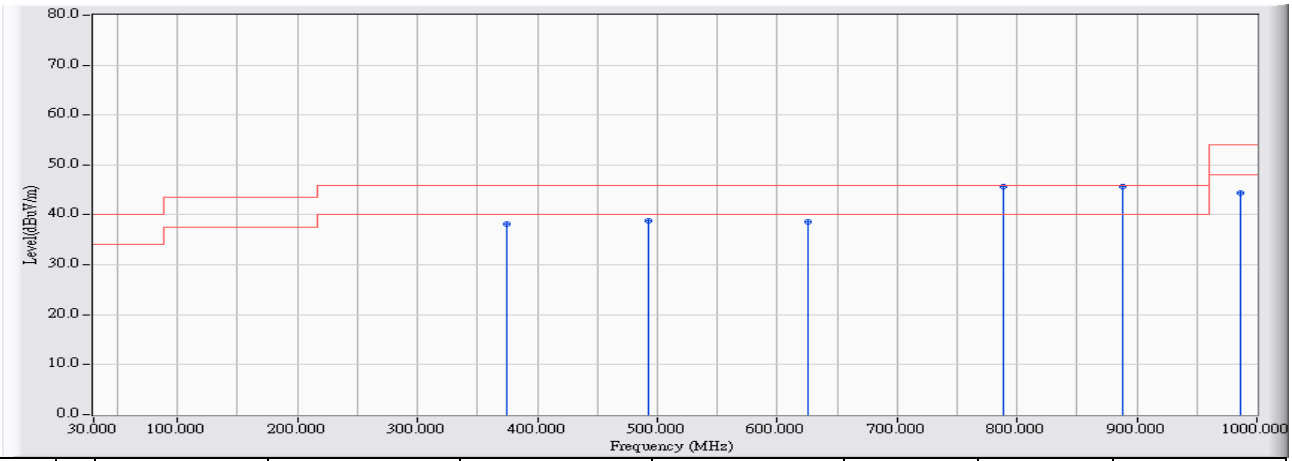


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		250.190	-20.538	61.883	41.345	-4.655	46.000	QUASIPEAK
2		493.175	-15.595	55.264	39.668	-6.332	46.000	QUASIPEAK
3		625.095	-15.158	59.301	44.143	-1.857	46.000	QUASIPEAK
4	*	788.540	-13.458	59.233	45.774	-0.226	46.000	QUASIPEAK
5		887.480	-13.028	58.345	45.317	-0.683	46.000	QUASIPEAK
6		985.935	-12.268	56.928	44.660	-9.340	54.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/11/20 - 16:53**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n40MHz_5795MHz**

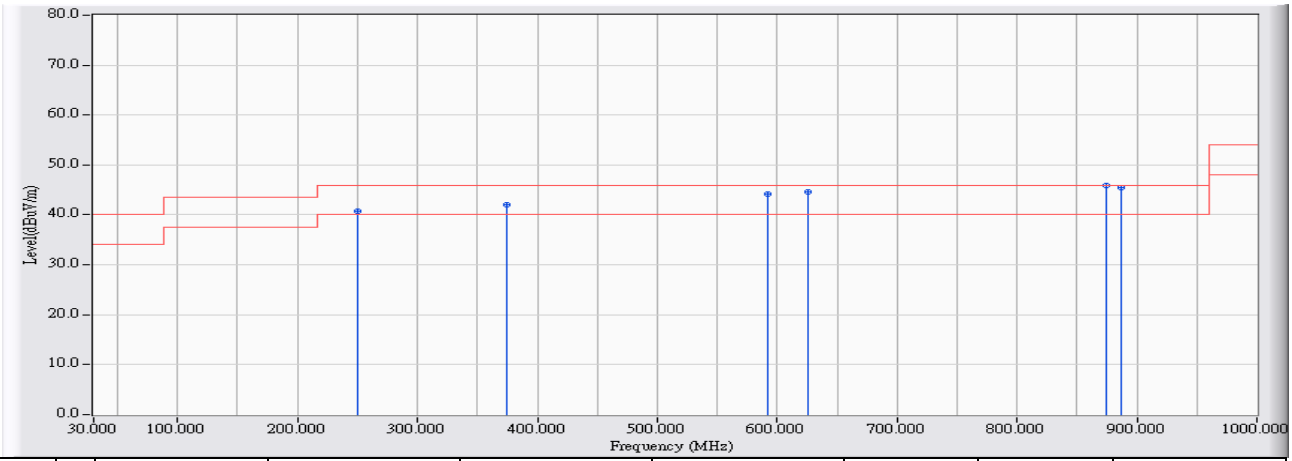


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		374.835	-18.049	56.192	38.142	-7.858	46.000	QUASIPEAK
2		492.690	-15.606	54.322	38.717	-7.283	46.000	QUASIPEAK
3		625.095	-15.158	53.680	38.522	-7.478	46.000	QUASIPEAK
4		788.540	-13.458	59.122	45.663	-0.337	46.000	QUASIPEAK
5	*	887.480	-13.028	58.694	45.666	-0.334	46.000	QUASIPEAK
6		985.935	-12.268	56.632	44.364	-9.636	54.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/11/20 - 19:49**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 2: Transmit (Adapter: HK-AX-120A200-US) 802.11n20MHz_5785MHz**

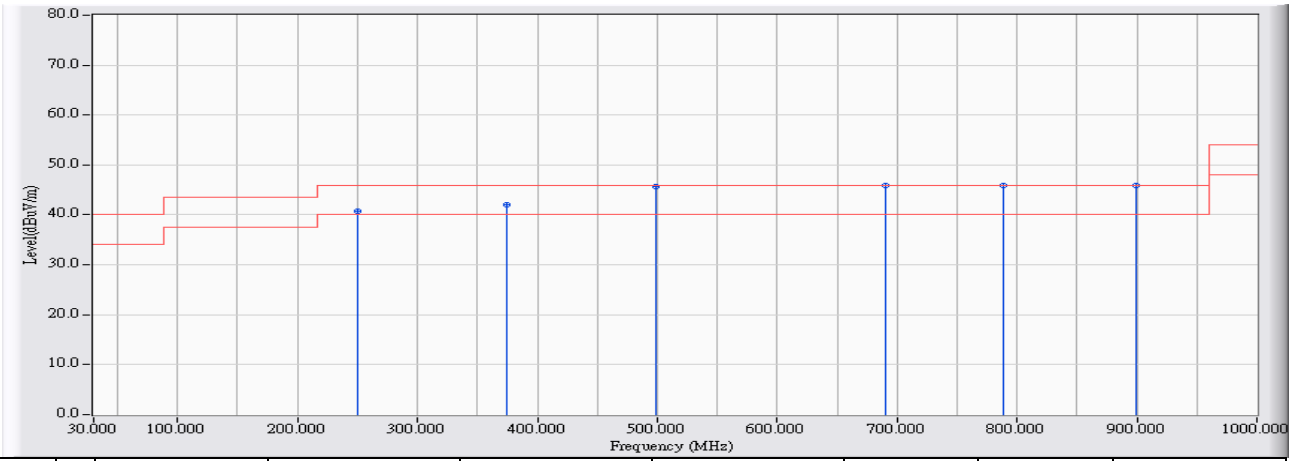


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		250.190	-21.013	61.782	40.769	-5.231	46.000	QUASIPEAK
2		374.835	-18.175	60.111	41.936	-4.064	46.000	QUASIPEAK
3		591.630	-15.525	59.635	44.110	-1.890	46.000	QUASIPEAK
4		625.095	-15.389	60.106	44.717	-1.283	46.000	QUASIPEAK
5	*	874.870	-13.393	59.217	45.824	-0.176	46.000	QUASIPEAK
6		886.995	-13.361	58.837	45.476	-0.524	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/11/20 - 19:54**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 2: Transmit (Adapter: HK-AX-120A200-US) 802.11n20MHz_5785MHz**

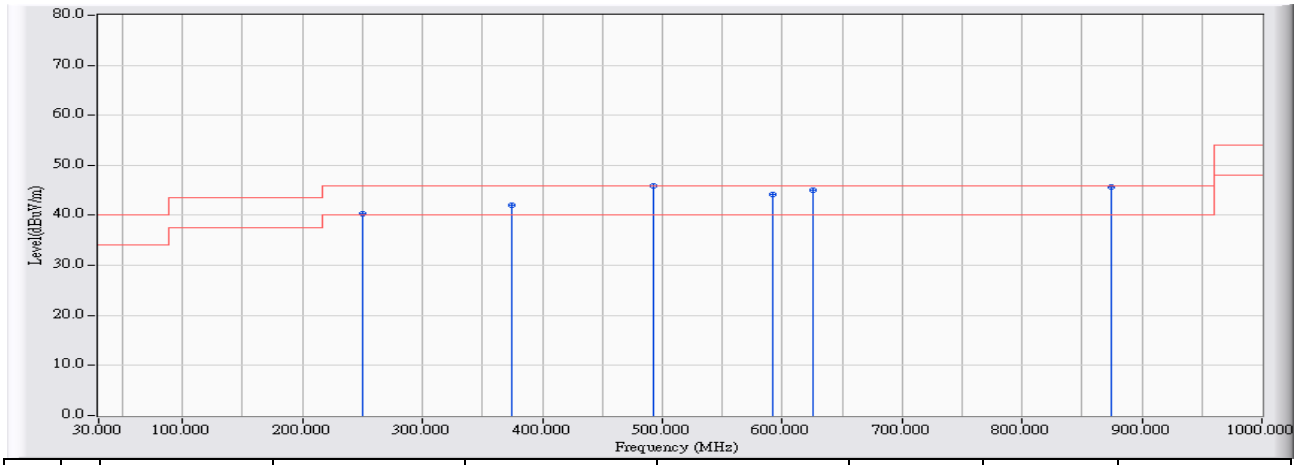


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		250.190	-21.013	61.782	40.769	-5.231	46.000	QUASIPEAK
2		374.835	-18.175	60.111	41.936	-4.064	46.000	QUASIPEAK
3		498.510	-15.647	61.285	45.639	-0.361	46.000	QUASIPEAK
4	*	690.085	-15.058	60.980	45.922	-0.078	46.000	QUASIPEAK
5		788.540	-13.749	59.639	45.890	-0.110	46.000	QUASIPEAK
6		899.605	-13.328	59.244	45.915	-0.085	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 2013/11/20 - 19:59**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 2: Transmit (Adapter: HK-AX-120A200-US) 802.11n40MHz_5795MHz**

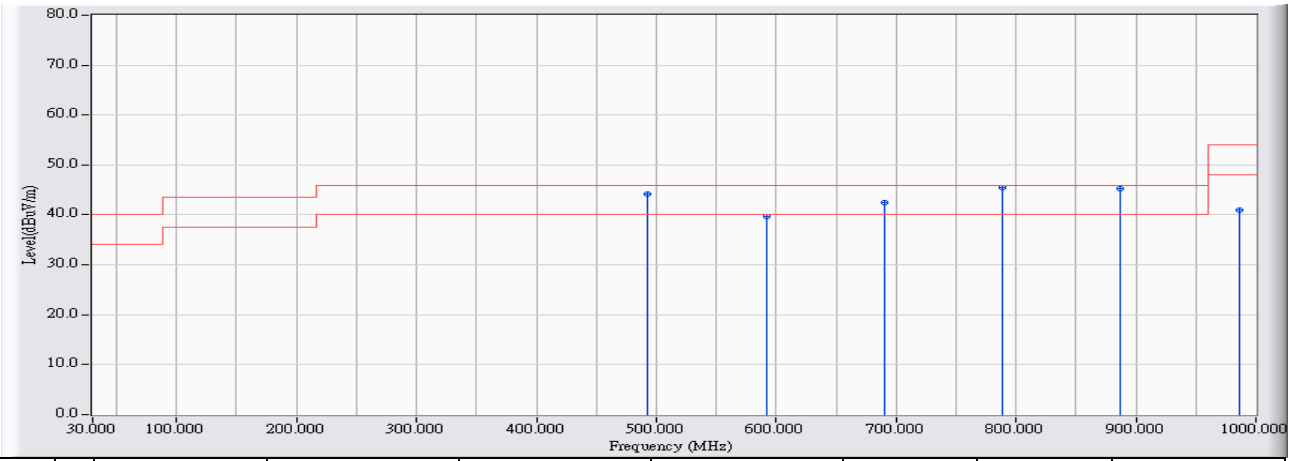


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		250.190	-21.013	61.347	40.334	-5.666	46.000	QUASIPEAK
2		374.835	-18.175	60.165	41.990	-4.010	46.000	QUASIPEAK
3	*	492.690	-15.759	61.641	45.883	-0.117	46.000	QUASIPEAK
4		591.630	-15.525	59.628	44.103	-1.897	46.000	QUASIPEAK
5		625.095	-15.389	60.384	44.995	-1.005	46.000	QUASIPEAK
6		874.870	-13.393	59.127	45.734	-0.266	46.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Site : CB1	**Time : 22013/11/20 - 20:06**
Limit : FCC_CLASS_B_03M_QP	**Margin : 6**
Probe : CB1_FCC_EFS_30-1G-2_1011 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 2: Transmit (Adapter: HK-AX-120A200-US) 802.11n40MHz_5795MHz**



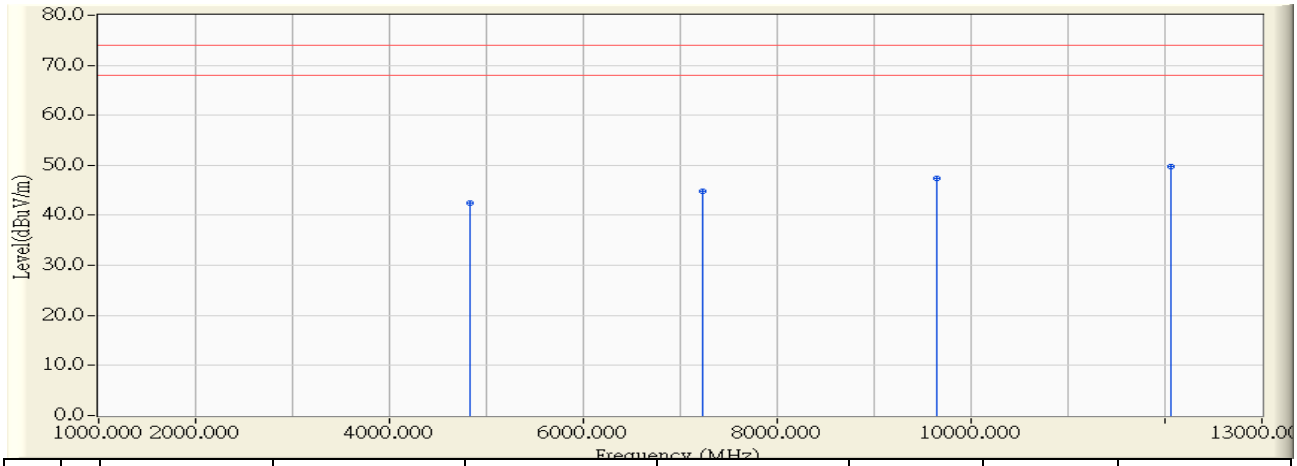
		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		492.690	-15.759	59.943	44.185	-1.815	46.000	QUASIPEAK
2		591.630	-15.525	55.156	39.631	-6.369	46.000	QUASIPEAK
3		690.085	-15.058	57.419	42.361	-3.639	46.000	QUASIPEAK
4	*	788.540	-13.749	59.220	45.471	-0.529	46.000	QUASIPEAK
5		886.995	-13.361	58.571	45.210	-0.790	46.000	QUASIPEAK
6		985.935	-12.712	53.601	40.889	-13.111	54.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Above 1GHz Spurious

Site : CB1	**Time : 2013/08/21 - 10:12**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11b_2412MHz**

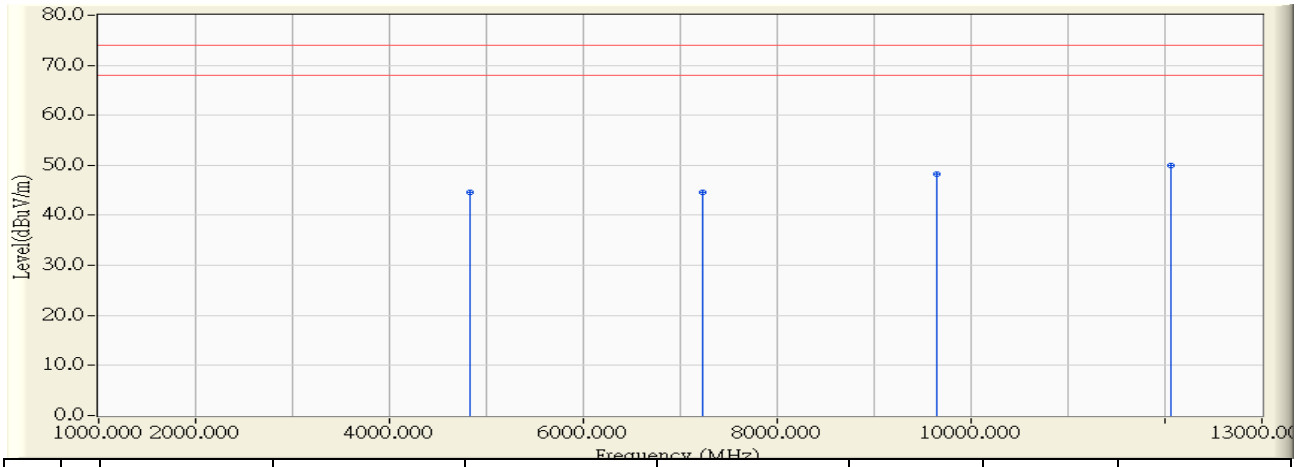


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4824.725	-0.801	43.230	42.429	-31.571	74.000	PEAK
2		7237.908	5.501	39.380	44.881	-29.119	74.000	PEAK
3		9648.733	9.235	38.190	47.426	-26.574	74.000	PEAK
4	*	12061.583	11.525	38.230	49.755	-24.245	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/21 - 10:18**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11b_2412MHz**

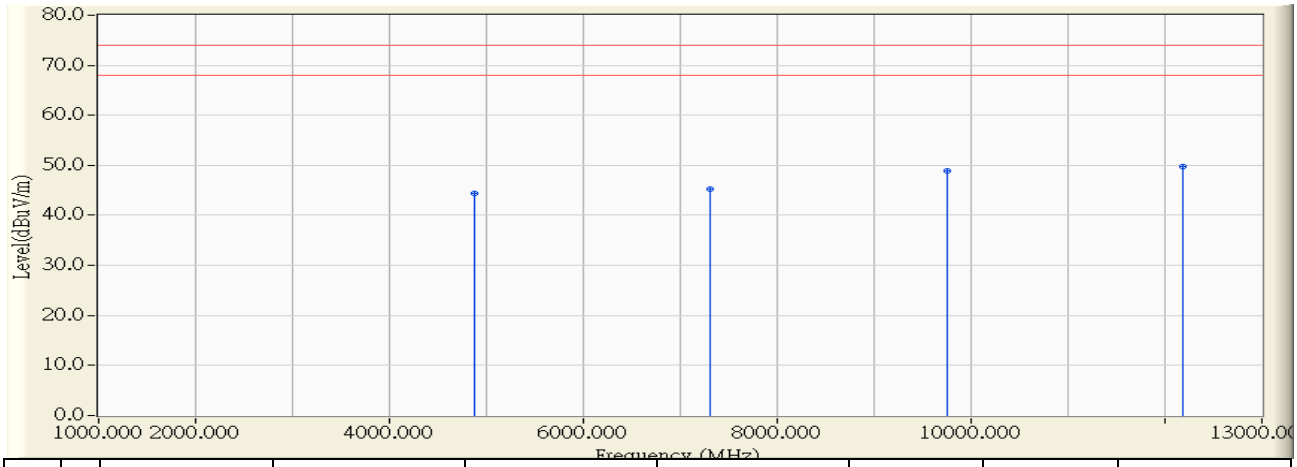


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4824.975	-0.801	45.510	44.709	-29.291	74.000	PEAK
2		7233.758	5.491	39.190	44.681	-29.319	74.000	PEAK
3		9646.392	9.219	39.130	48.349	-25.651	74.000	PEAK
4	*	12060.117	11.525	38.350	49.875	-24.125	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/21 - 10:46**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11b_2437MHz**

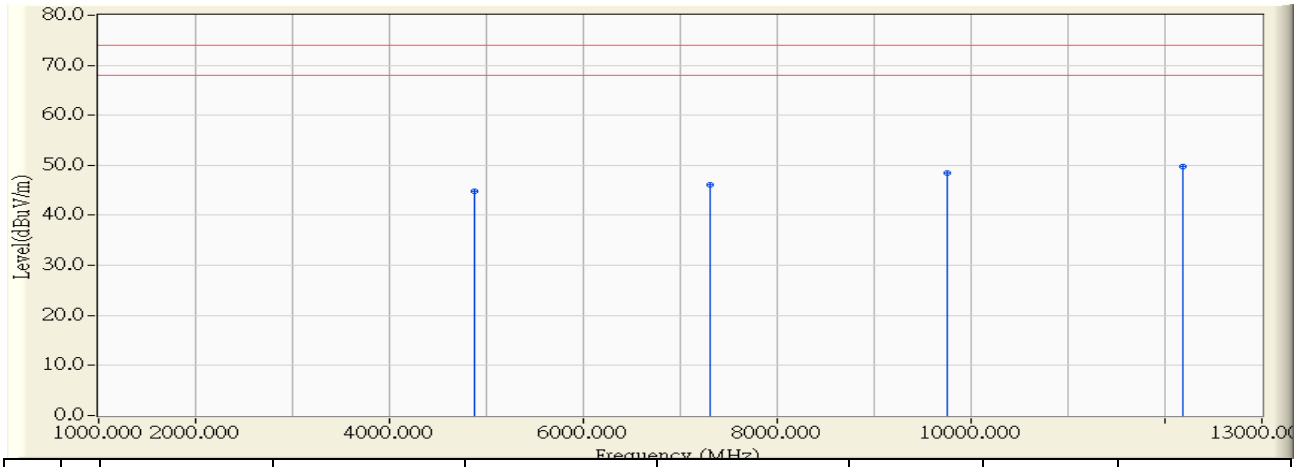


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4875.167	-0.669	45.170	44.501	-29.499	74.000	PEAK
2		7311.325	5.679	39.610	45.288	-28.712	74.000	PEAK
3		9749.050	9.963	38.840	48.803	-25.197	74.000	PEAK
4	*	12182.608	11.482	38.170	49.652	-24.348	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/21 - 11:09**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11b_2437MHz**

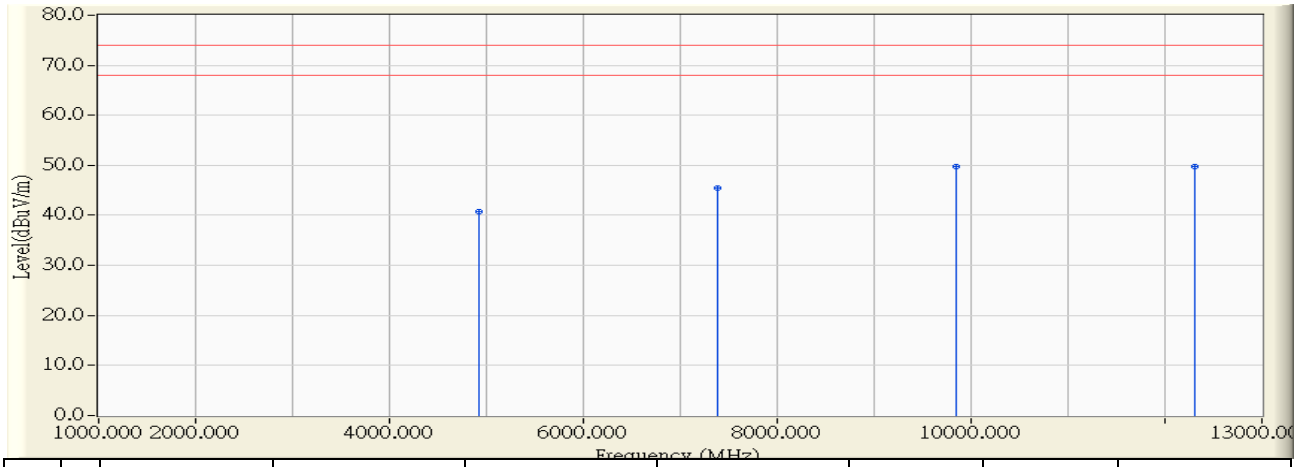


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4875.000	-0.669	45.500	44.831	-29.169	74.000	PEAK
2		7309.258	5.674	40.500	46.173	-27.827	74.000	PEAK
3		9748.833	9.962	38.580	48.542	-25.458	74.000	PEAK
4	*	12183.150	11.483	38.180	49.662	-24.338	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/21 - 11:17**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11b_2462MHz**

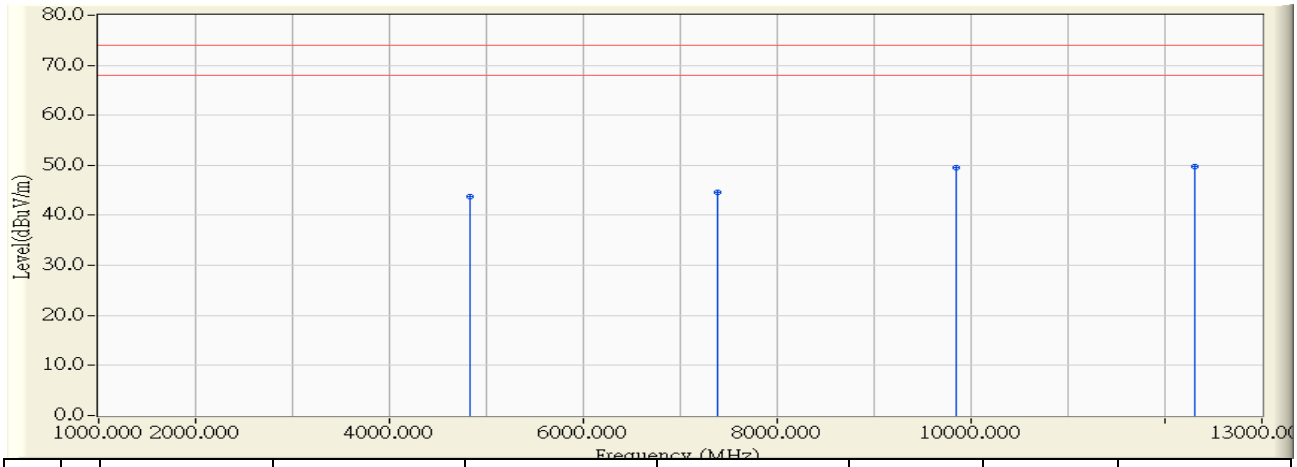


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4925.008	-0.538	41.300	40.762	-33.238	74.000	PEAK
2		7383.583	5.852	39.600	45.453	-28.547	74.000	PEAK
3		9846.750	10.671	39.020	49.691	-24.309	74.000	PEAK
4	*	12310.658	11.437	38.410	49.847	-24.153	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/21 - 11:22**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11b_2462MHz**

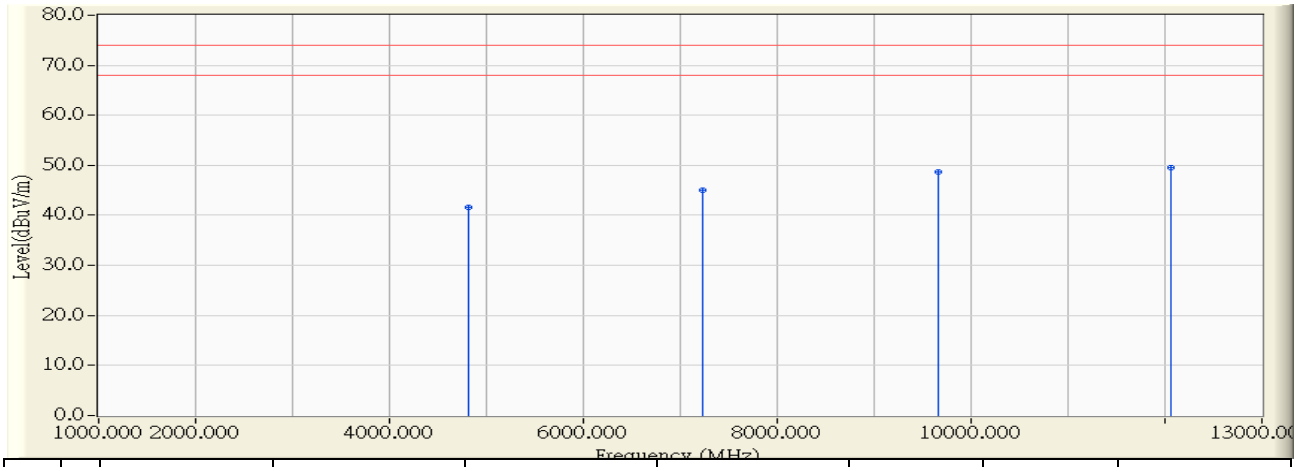


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4824.983	-0.801	44.490	43.689	-30.311	74.000	PEAK
2		7386.058	5.859	38.830	44.688	-29.312	74.000	PEAK
3		9848.050	10.680	38.910	49.591	-24.409	74.000	PEAK
4	*	12308.900	11.438	38.330	49.767	-24.233	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/21 - 11:28**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11g_2412MHz**

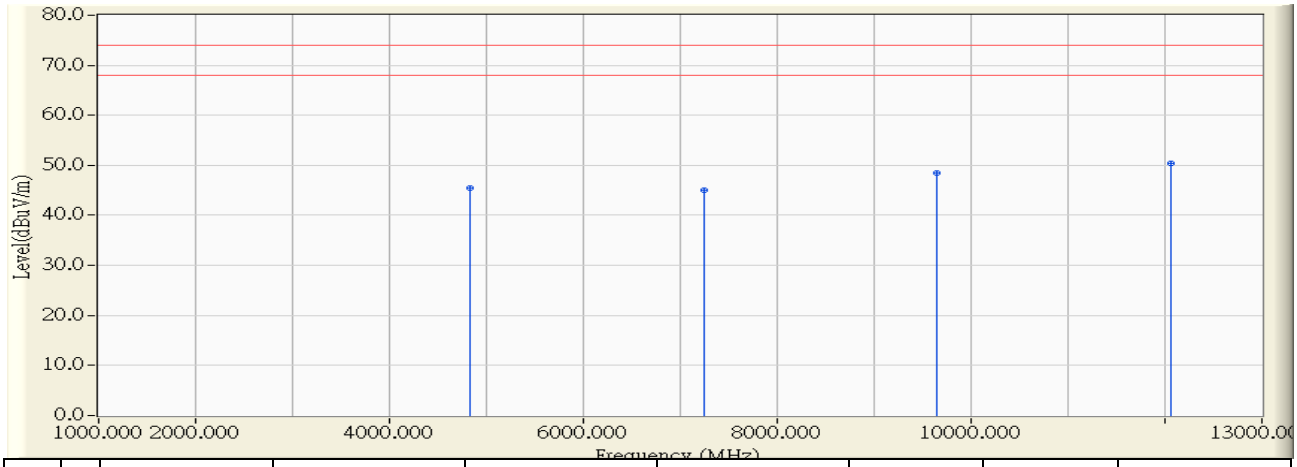


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4822.870	-0.806	42.330	41.524	-32.476	74.000	PEAK
2		7234.870	5.494	39.510	45.004	-28.996	74.000	PEAK
3		9657.500	9.300	39.340	48.640	-25.360	74.000	PEAK
4	*	12057.700	11.526	37.990	49.516	-24.484	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/21 - 11:33**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11g_2412MHz**

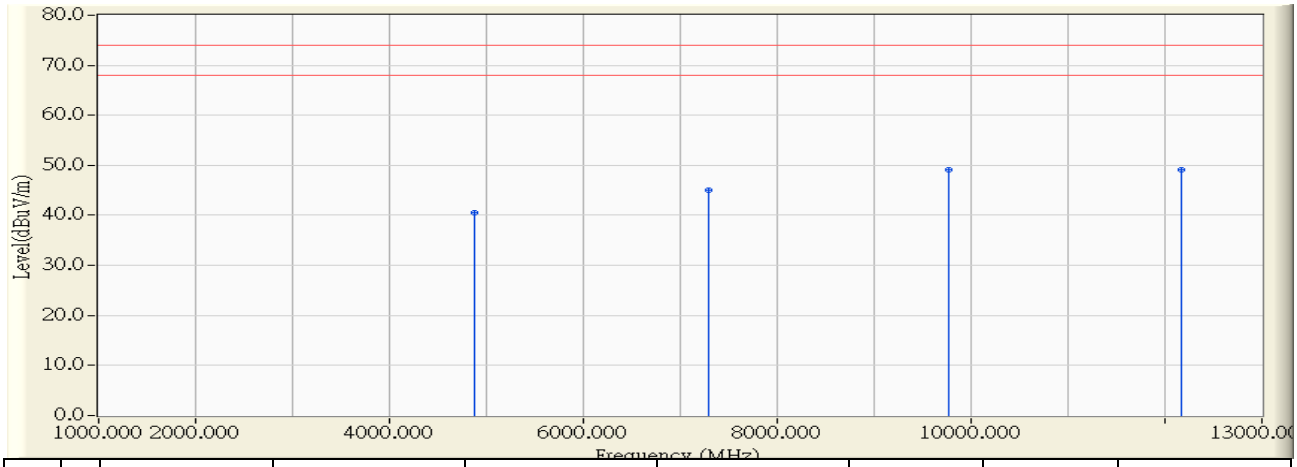


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4823.080	-0.805	46.350	45.544	-28.456	74.000	PEAK
2		7242.200	5.511	39.460	44.971	-29.029	74.000	PEAK
3		9645.970	9.216	39.270	48.486	-25.514	74.000	PEAK
4	*	12058.400	11.526	38.890	50.416	-23.584	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/21 - 11:38**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11g_2437MHz**

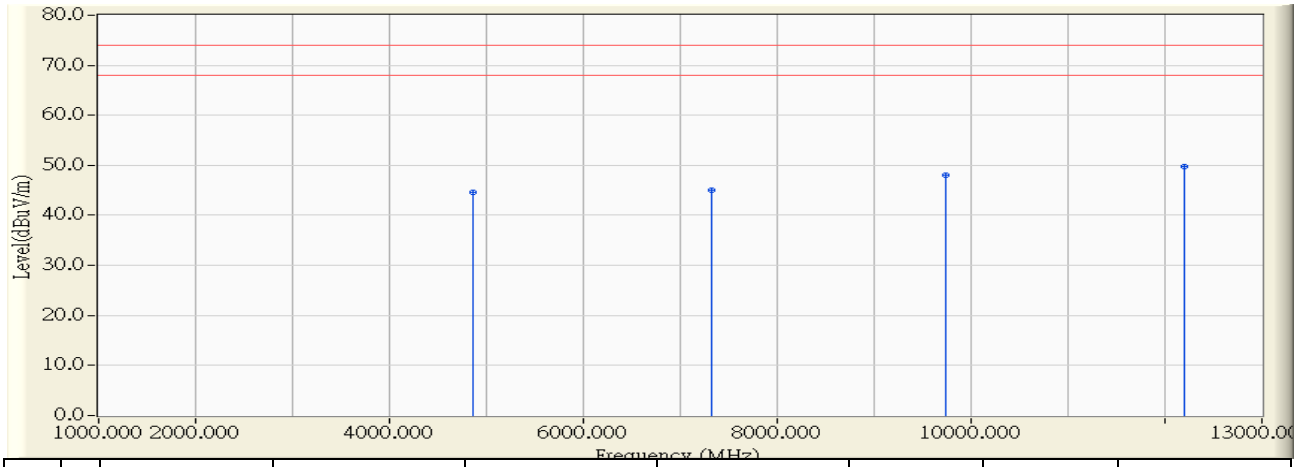


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4875.250	-0.669	41.250	40.581	-33.419	74.000	PEAK
2		7297.830	5.646	39.340	44.986	-29.014	74.000	PEAK
3		9766.250	10.087	39.120	49.208	-24.792	74.000	PEAK
4	*	12171.830	11.485	37.730	49.216	-24.784	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/21 - 11:41**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11g_2437MHz**

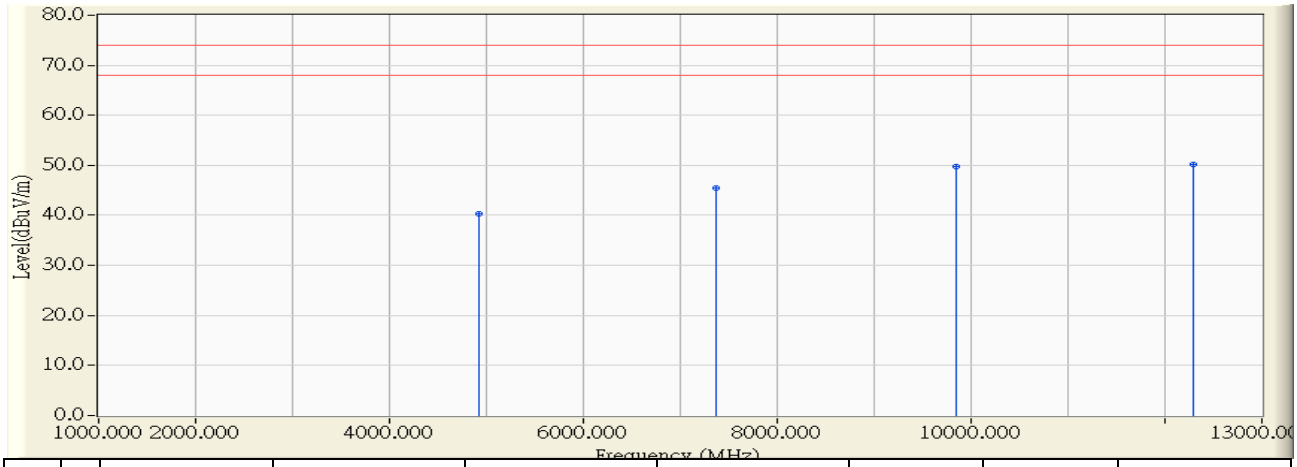


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4868.830	-0.685	45.250	44.564	-29.436	74.000	PEAK
2		7328.750	5.720	39.390	45.110	-28.890	74.000	PEAK
3		9738.420	9.886	38.220	48.106	-25.894	74.000	PEAK
4	*	12192.330	11.479	38.210	49.689	-24.311	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/21 - 11:46**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11g_2462MHz**

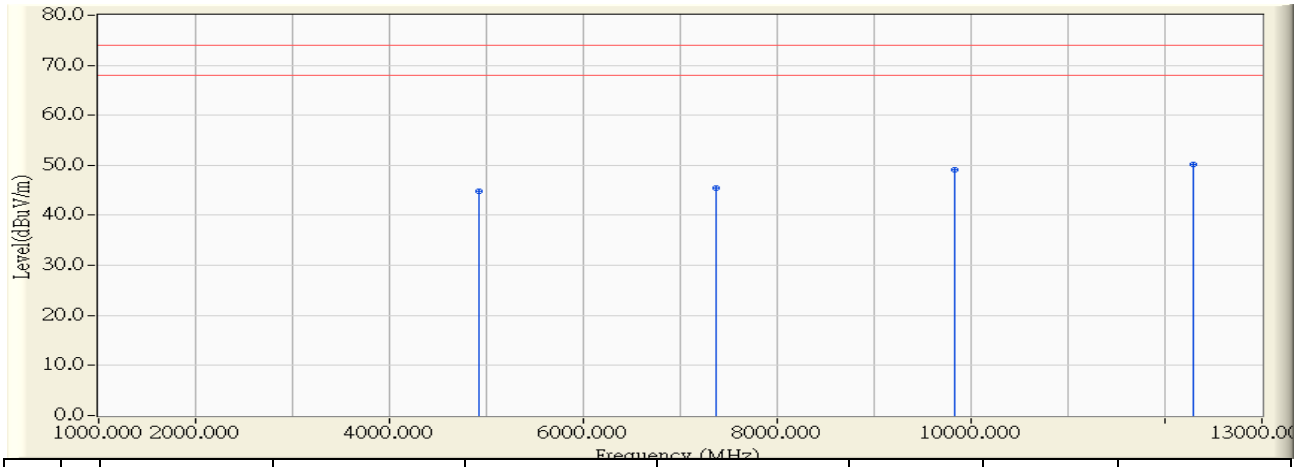


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4922.830	-0.543	40.970	40.426	-33.574	74.000	PEAK
2		7369.750	5.820	39.730	45.549	-28.451	74.000	PEAK
3		9846.830	10.672	39.100	49.772	-24.228	74.000	PEAK
4	*	12295.420	11.441	38.660	50.102	-23.898	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/21 - 11:49**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11g_2462MHz**

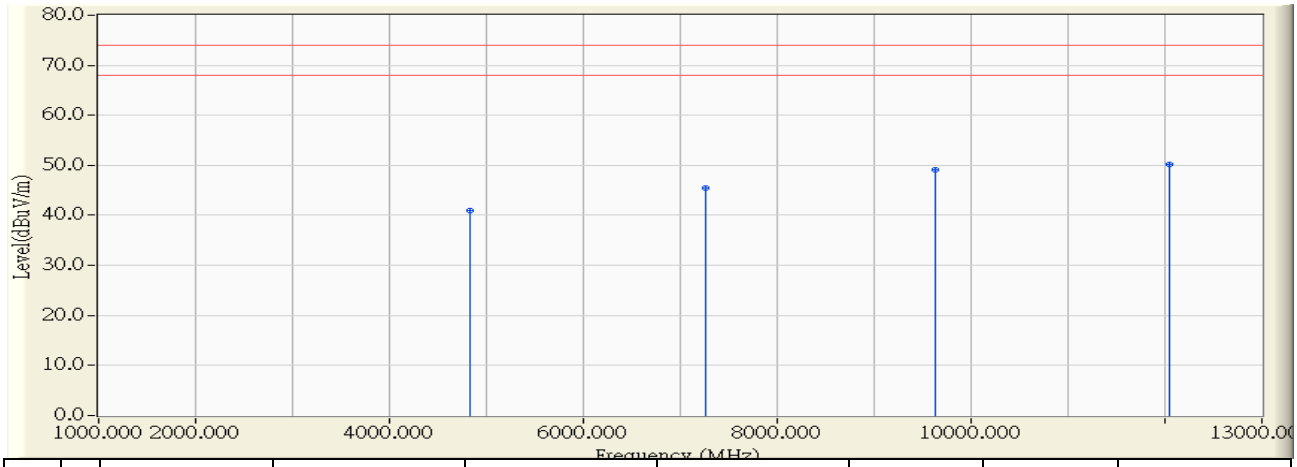


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4919.080	-0.554	45.390	44.836	-29.164	74.000	PEAK
2		7362.830	5.802	39.670	45.472	-28.528	74.000	PEAK
3		9833.170	10.573	38.480	49.053	-24.947	74.000	PEAK
4	*	12295.420	11.441	38.660	50.102	-23.898	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 17:03**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n20MHz_2412MHz**

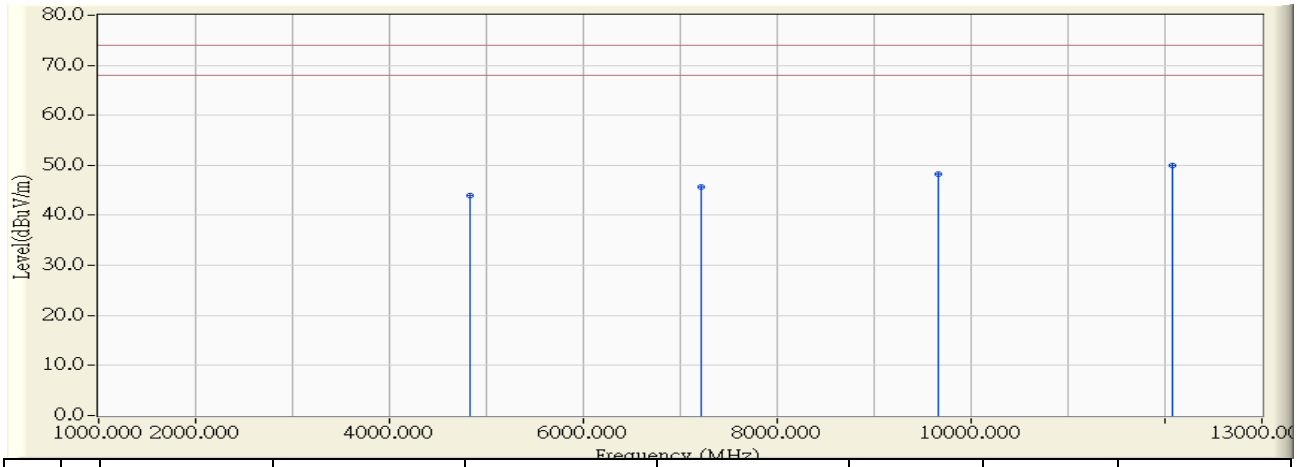


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4828.330	-0.791	41.720	40.928	-33.072	74.000	PEAK
2		7261.000	5.557	39.900	45.457	-28.543	74.000	PEAK
3		9636.080	9.143	39.900	49.044	-24.956	74.000	PEAK
4	*	12041.830	11.531	38.690	50.222	-23.778	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 17:08**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n20MHz_2412MHz**

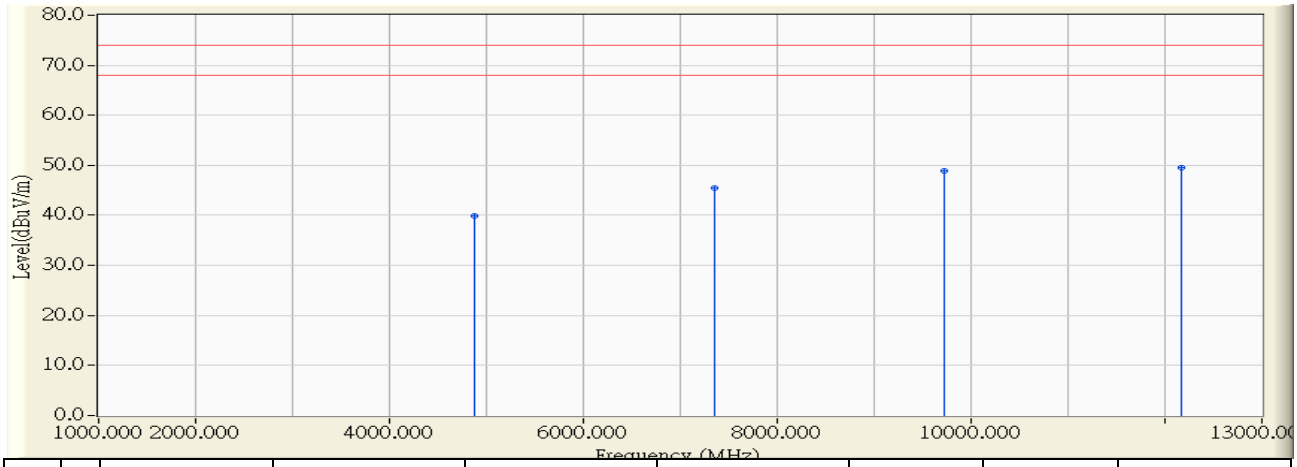


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4828.580	-0.791	44.660	43.869	-30.131	74.000	PEAK
2		7213.330	5.442	40.300	45.742	-28.258	74.000	PEAK
3		9668.500	9.379	38.810	48.189	-25.811	74.000	PEAK
4	*	12070.580	11.521	38.370	49.891	-24.109	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 17:14**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n20MHz_2437MHz**

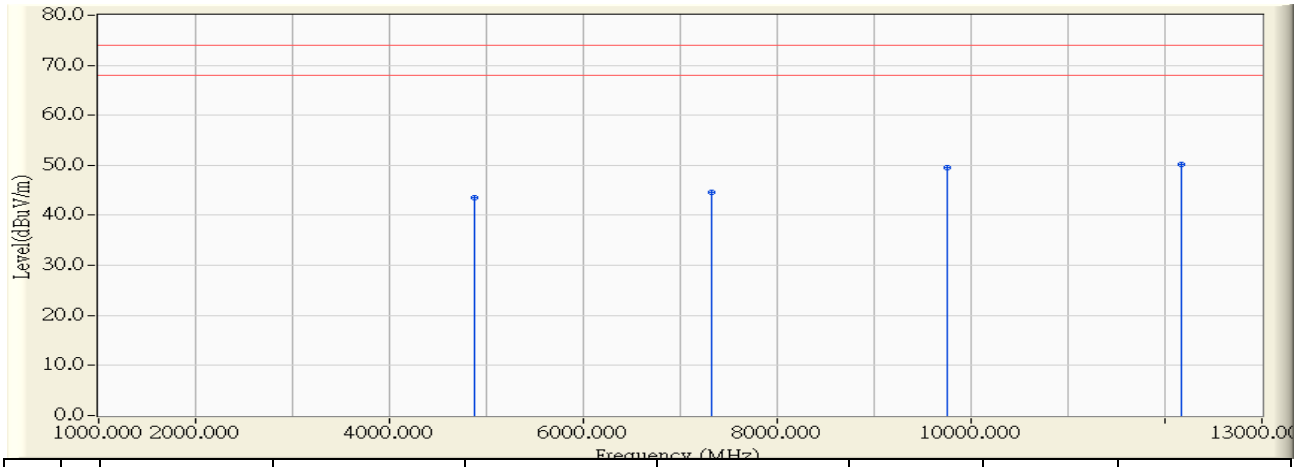


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4882.170	-0.651	40.570	39.920	-34.080	74.000	PEAK
2		7346.330	5.763	39.620	45.383	-28.617	74.000	PEAK
3		9716.670	9.729	39.110	48.838	-25.162	74.000	PEAK
4	*	12174.330	11.485	38.010	49.495	-24.505	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 17:17**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)** **802.11n20MHz_2437MHz**

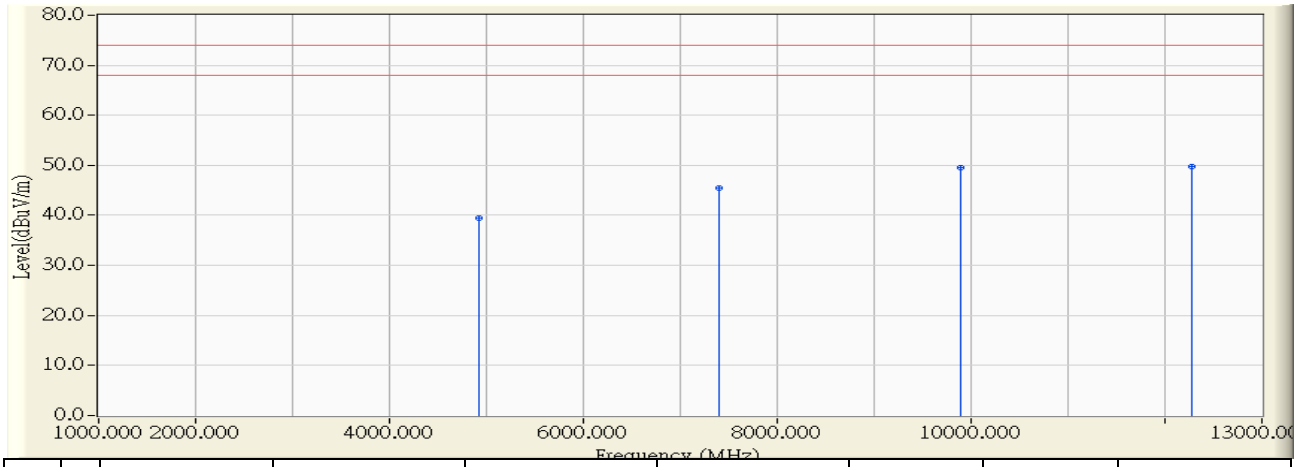


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4875.330	-0.668	44.140	43.472	-30.528	74.000	PEAK
2		7326.500	5.715	38.880	44.595	-29.405	74.000	PEAK
3		9746.330	9.944	39.570	49.513	-24.487	74.000	PEAK
4	*	12162.170	11.490	38.780	50.269	-23.731	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 17:22**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n20MHz_2462MHz**

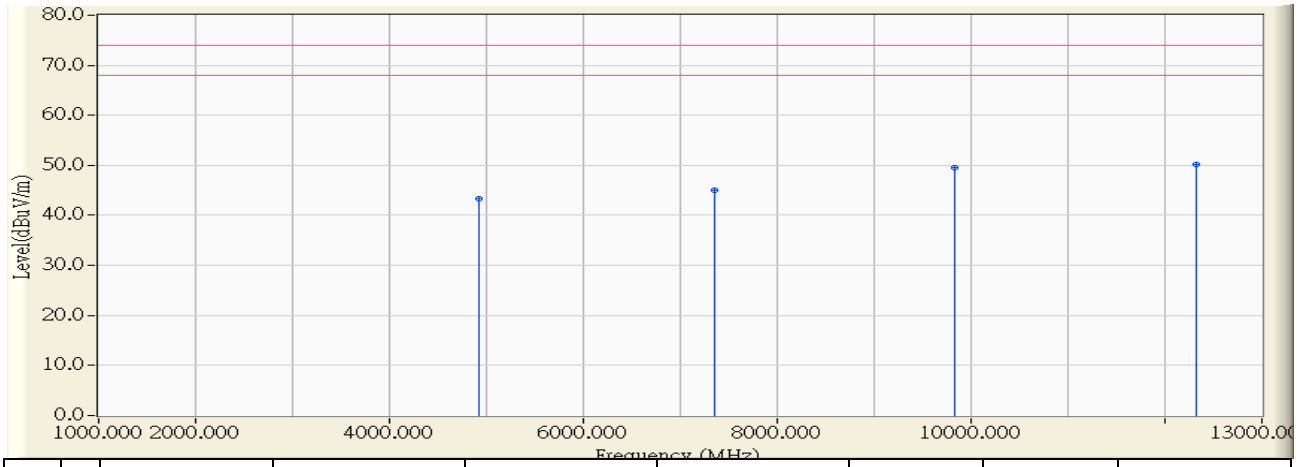


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4918.500	-0.555	39.920	39.365	-34.635	74.000	PEAK
2		7406.830	5.909	39.660	45.569	-28.431	74.000	PEAK
3		9885.830	10.954	38.510	49.464	-24.536	74.000	PEAK
4	*	12278.000	11.448	38.360	49.808	-24.192	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 17:25**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n20MHz_2462MHz**

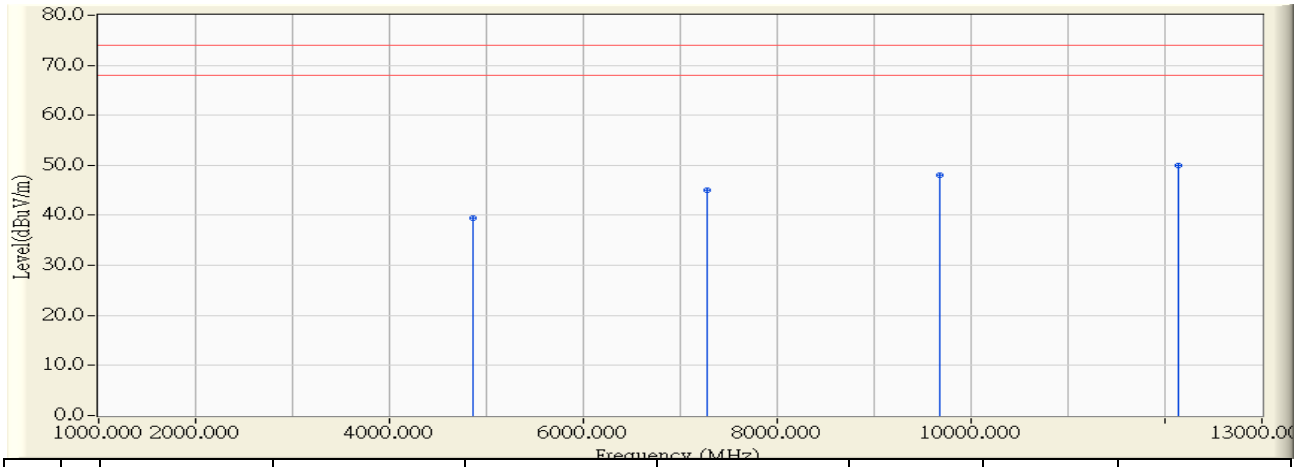


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4922.500	-0.544	43.920	43.375	-30.625	74.000	PEAK
2		7351.170	5.774	39.260	45.034	-28.966	74.000	PEAK
3		9836.330	10.596	38.950	49.546	-24.454	74.000	PEAK
4	*	12321.170	11.433	38.700	50.133	-23.867	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 17:30**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n40MHz_2422MHz**

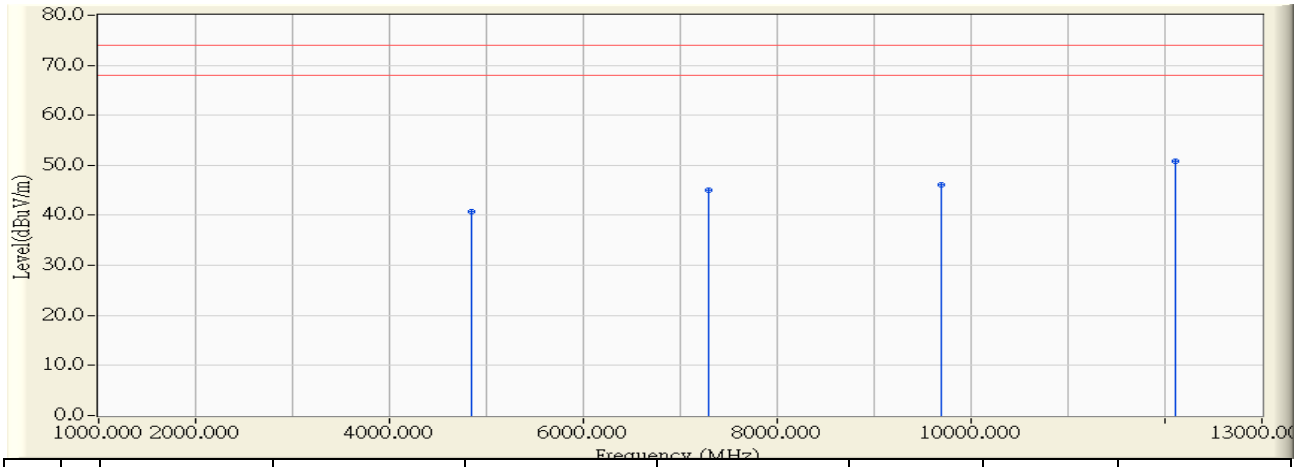


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4854.500	-0.723	40.160	39.437	-34.563	74.000	PEAK
2		7271.670	5.582	39.450	45.032	-28.968	74.000	PEAK
3		9683.000	9.484	38.570	48.054	-25.946	74.000	PEAK
4	*	12138.000	11.498	38.480	49.978	-24.022	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 17:32**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n40MHz_2422MHz**

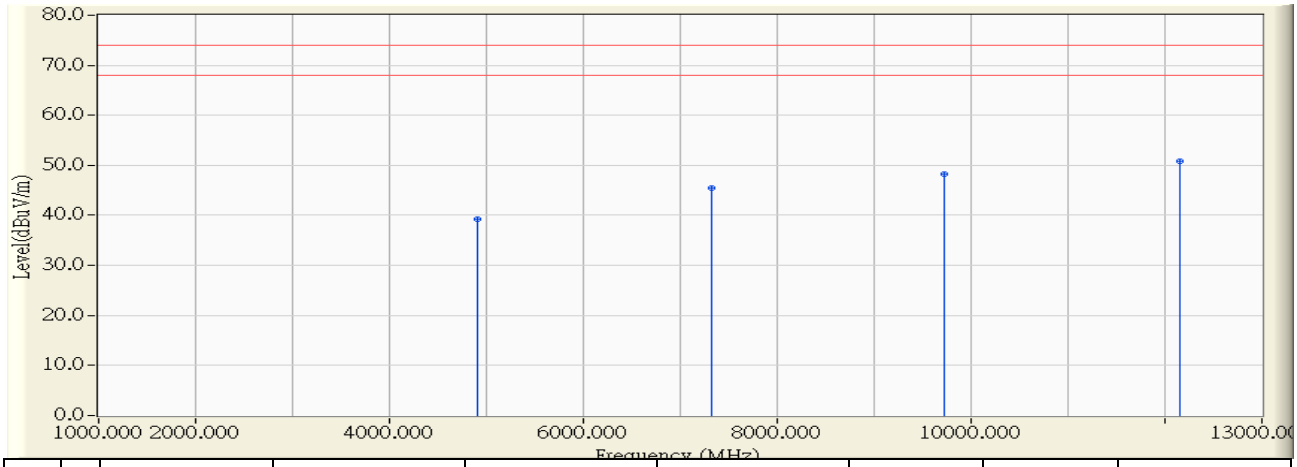


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4841.500	-0.757	41.490	40.733	-33.267	74.000	PEAK
2		7287.670	5.620	39.320	44.941	-29.059	74.000	PEAK
3		9691.330	9.545	36.560	46.105	-27.895	74.000	PEAK
4	*	12113.330	11.506	39.340	50.846	-23.154	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 17:35**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n40MHz_2437MHz**

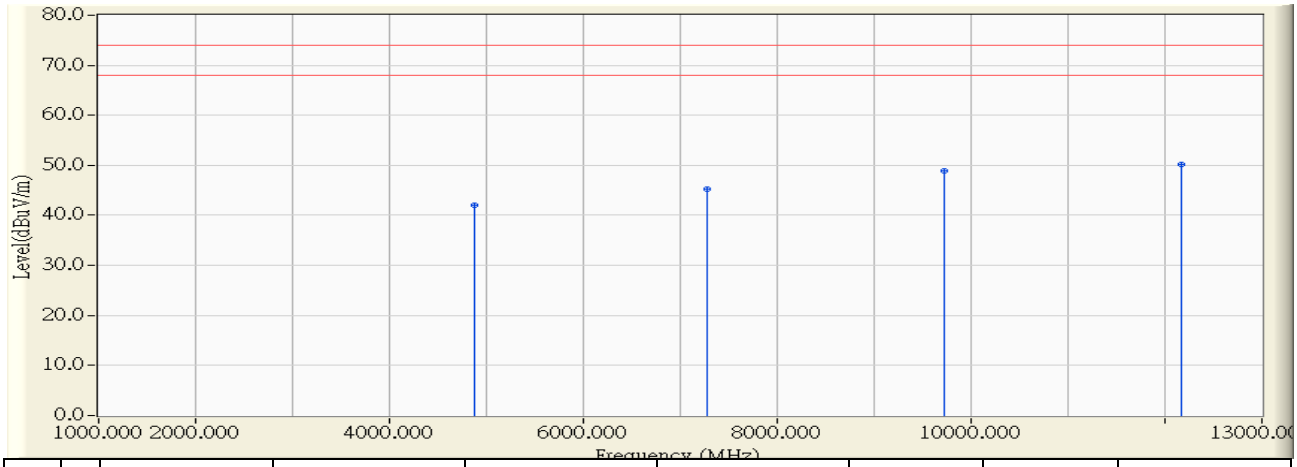


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4902.830	-0.596	39.900	39.304	-34.696	74.000	PEAK
2		7320.330	5.700	39.770	45.470	-28.530	74.000	PEAK
3		9728.170	9.811	38.550	48.362	-25.638	74.000	PEAK
4	*	12159.830	11.490	39.440	50.930	-23.070	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 17:39**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n40MHz_2437MHz**

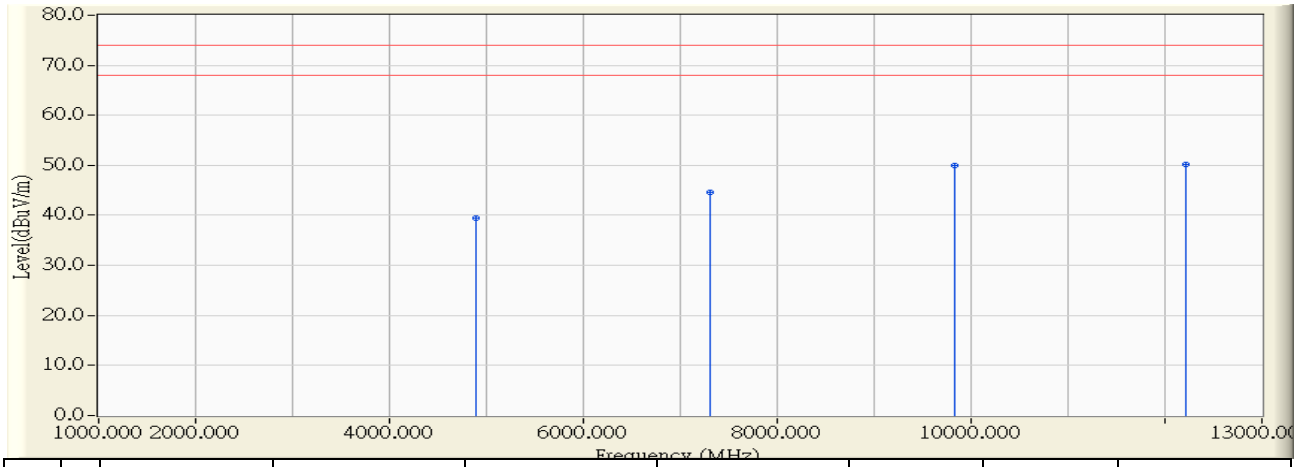


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4874.000	-0.672	42.640	41.968	-32.032	74.000	PEAK
2		7272.170	5.584	39.740	45.324	-28.676	74.000	PEAK
3		9730.000	9.825	38.980	48.805	-25.195	74.000	PEAK
4	*	12173.500	11.485	38.760	50.245	-23.755	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 17:43**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n40MHz_2452MHz**

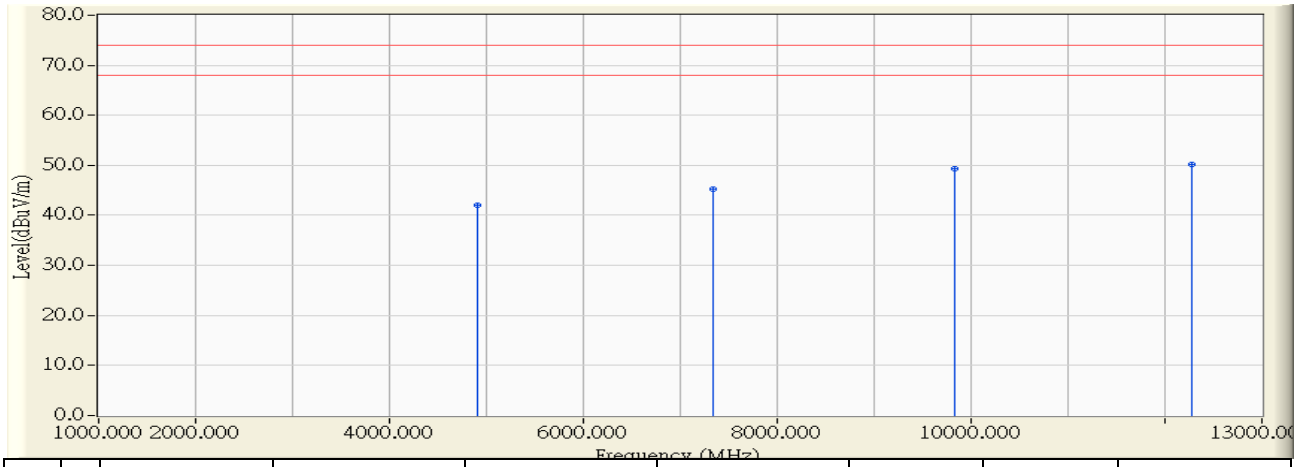


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4885.000	-0.643	40.050	39.407	-34.593	74.000	PEAK
2		7309.170	5.673	38.980	44.653	-29.347	74.000	PEAK
3		9834.670	10.584	39.430	50.014	-23.986	74.000	PEAK
4	*	12215.670	11.471	38.640	50.110	-23.890	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 17:47**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n40MHz_2452MHz**

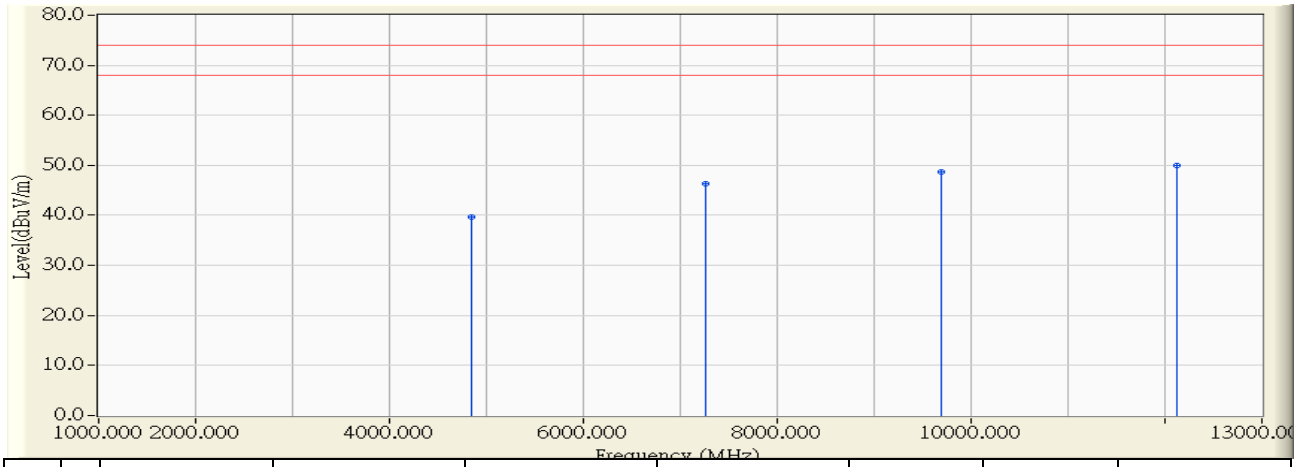


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4900.000	-0.604	42.610	42.006	-31.994	74.000	PEAK
2		7345.330	5.761	39.390	45.150	-28.850	74.000	PEAK
3		9829.830	10.549	38.700	49.249	-24.751	74.000	PEAK
4	*	12281.000	11.448	38.700	50.147	-23.853	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 18:49**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n40MHz_2422MHz_Co-location**

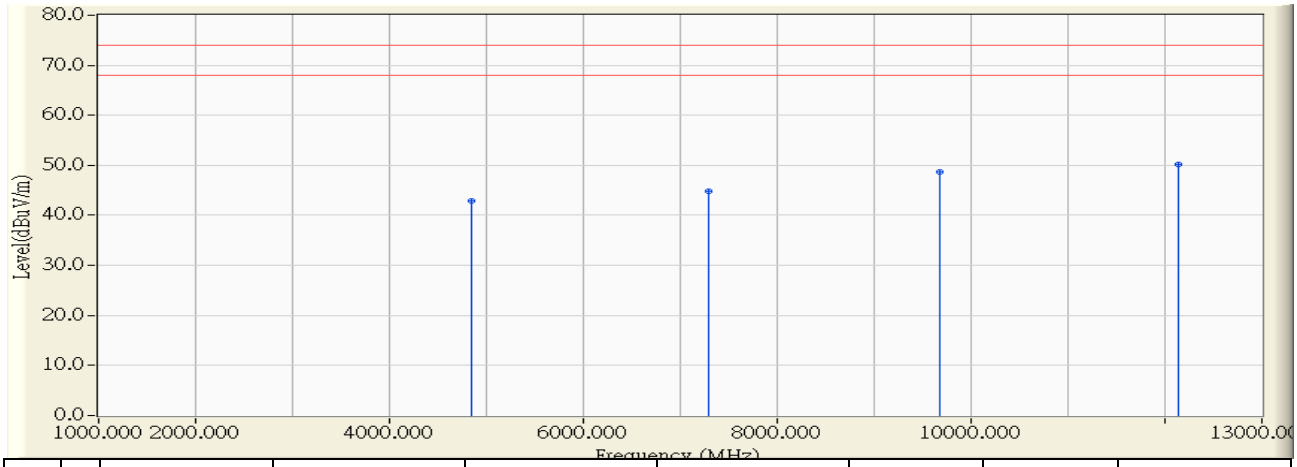


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4850.750	-0.733	40.410	39.677	-34.323	74.000	PEAK
2		7268.080	5.573	40.820	46.394	-27.606	74.000	PEAK
3		9687.000	9.514	39.070	48.583	-25.417	74.000	PEAK
4	*	12117.330	11.505	38.430	49.935	-24.065	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 18:54**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21) 802.11n40MHz_2422MHz_Co-location**

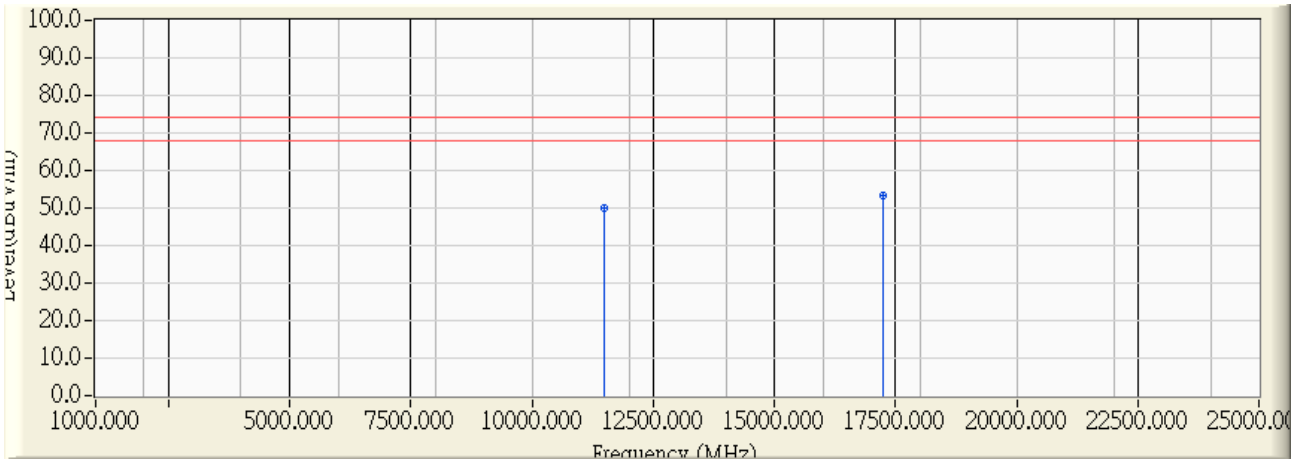


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4839.830	-0.761	43.700	42.938	-31.062	74.000	PEAK
2		7285.830	5.617	39.270	44.887	-29.113	74.000	PEAK
3		9672.330	9.407	39.300	48.707	-25.293	74.000	PEAK
4	*	12130.920	11.501	38.770	50.270	-23.730	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 09:50**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_5745MHz**

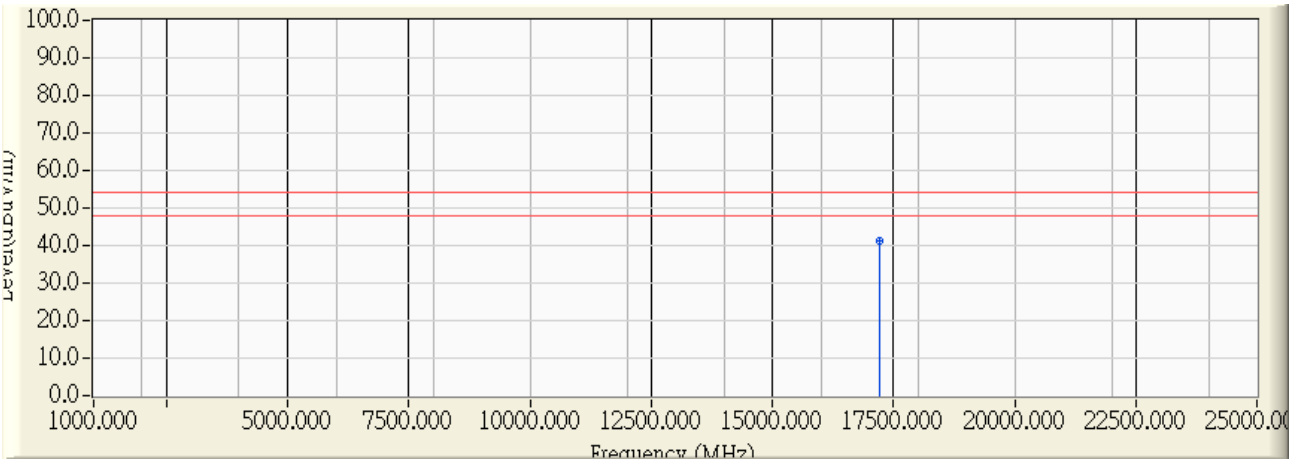


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11495.950	12.131	37.705	49.836	-24.164	54.000	74.000	PEAK
2	*	17233.150	15.733	37.598	53.331	-20.669	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 09:55**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_5745MHz**

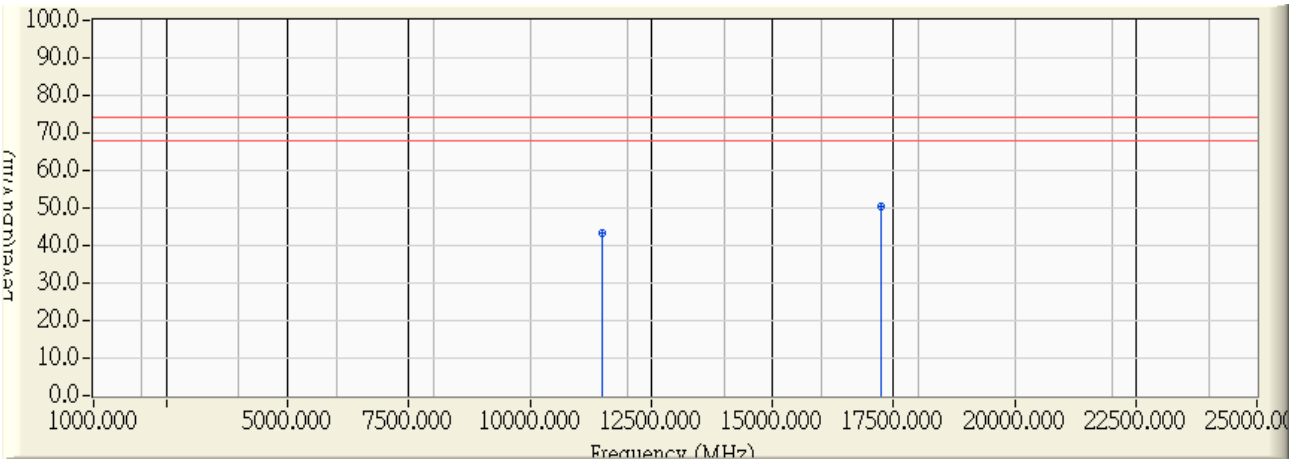


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17211.600	15.645	25.787	41.432	-12.568	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 09:46**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_5745MHz**

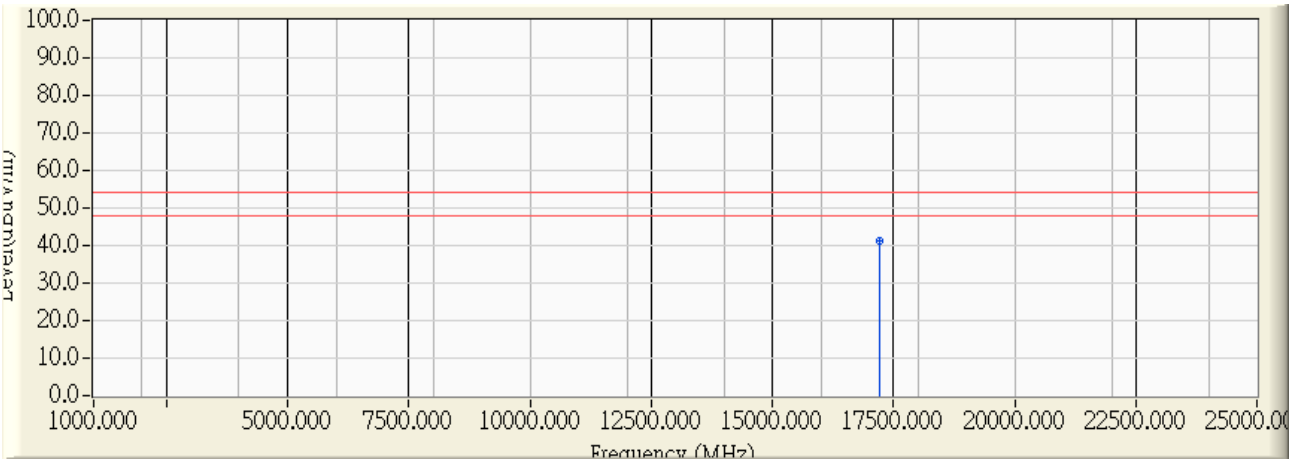


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11499.850	12.128	31.172	43.300	-30.700	54.000	74.000	PEAK
2	*	17233.000	15.733	34.689	50.421	-23.579	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 09:54**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_5745MHz**

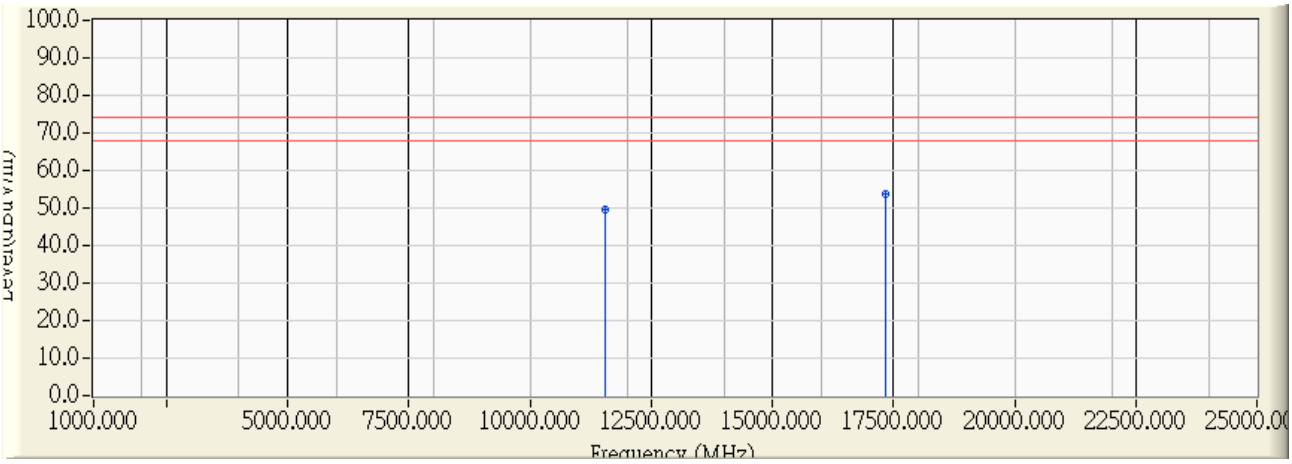


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17210.000	15.639	25.792	41.431	-12.569	54.000	74.000	AVERAGEP

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:17**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_5785MHz**

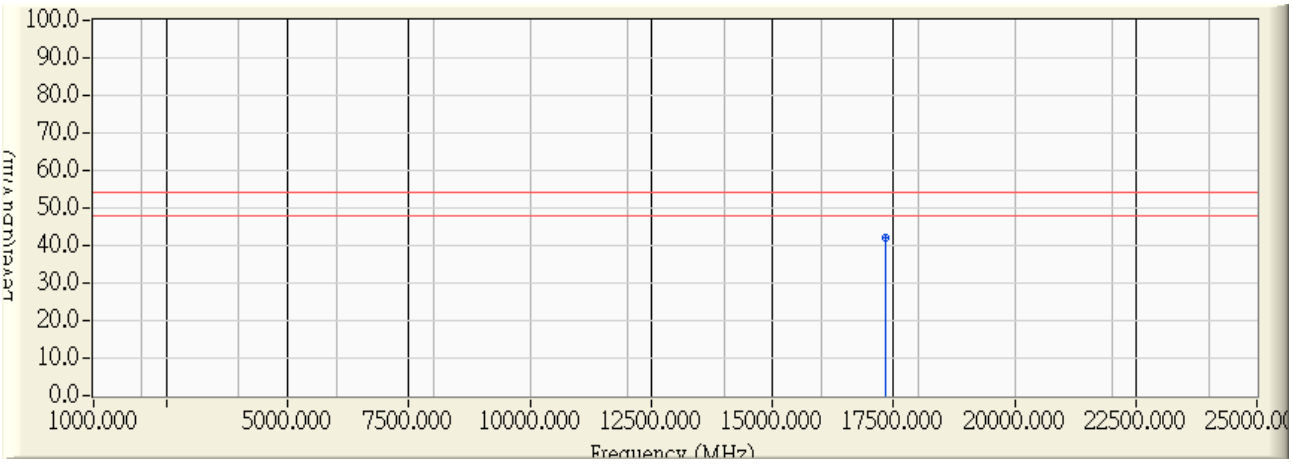


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11545.200	12.078	37.314	49.391	-24.609	54.000	74.000	PEAK
2	*	17333.850	16.142	37.598	53.740	-20.260	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:18**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_5785MHz**

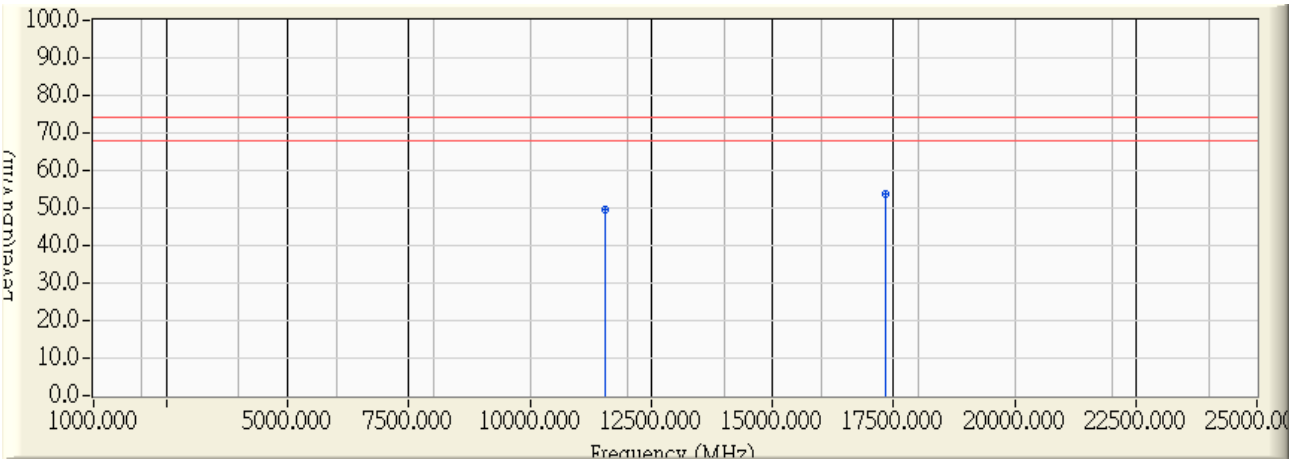


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17333.850	16.142	25.785	41.927	-12.073	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:21**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_5785MHz**

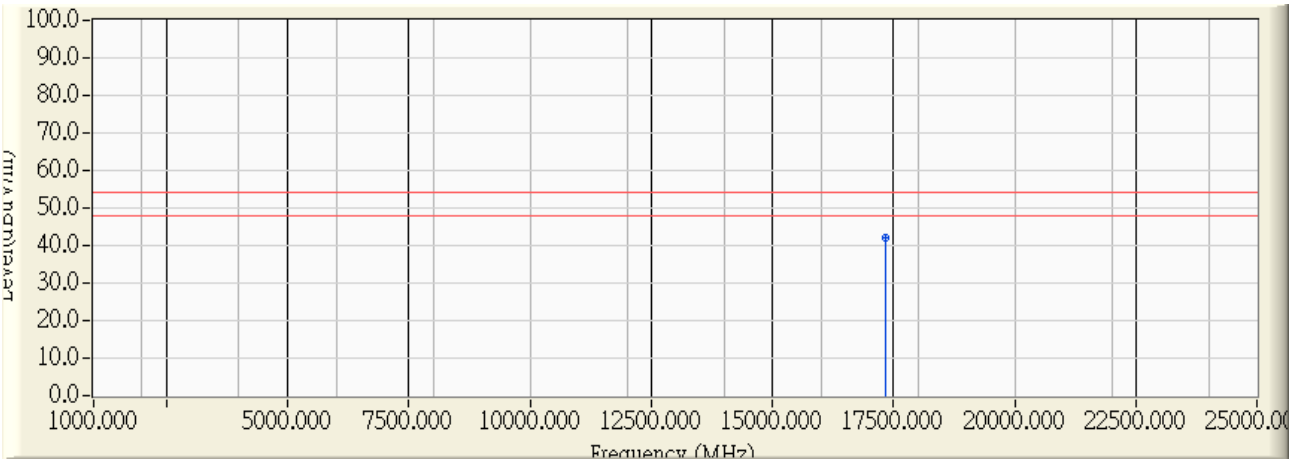


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11552.450	12.070	37.538	49.607	-24.393	54.000	74.000	PEAK
2	*	17338.200	16.160	37.764	53.924	-20.076	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:22**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_5785MHz**

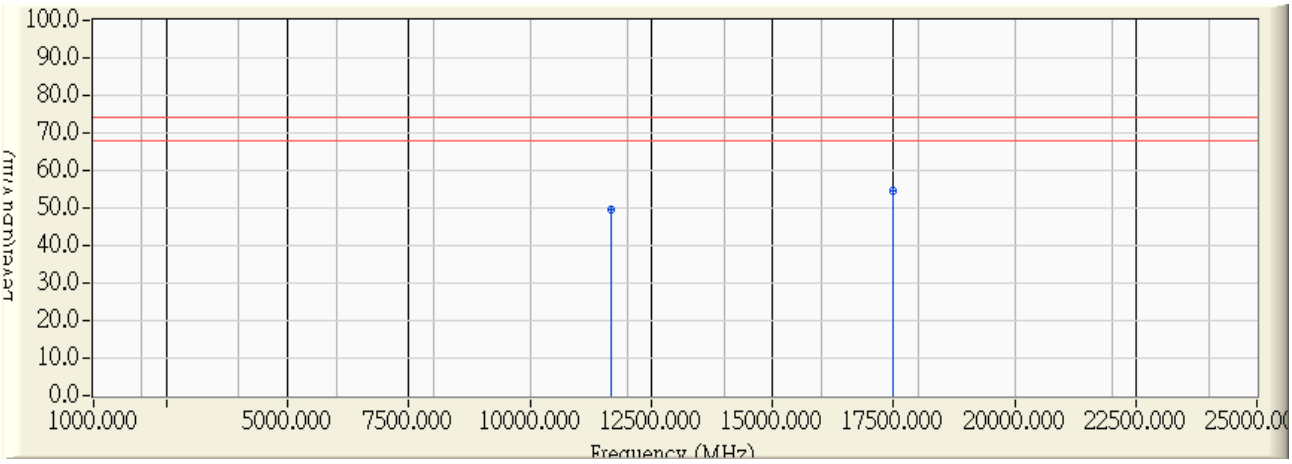


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17334.450	16.145	25.789	41.934	-12.066	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:29**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_582MHz**

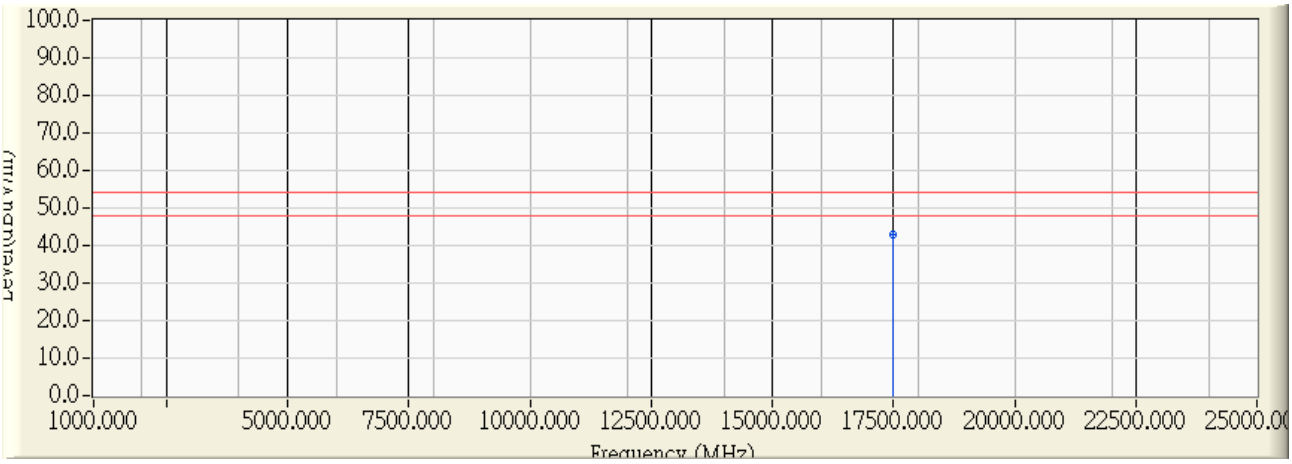


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11667.500	11.935	37.633	49.568	-24.432	54.000	74.000	PEAK
2	*	17486.300	16.762	37.910	54.672	-19.328	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:30**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_5825MHz**

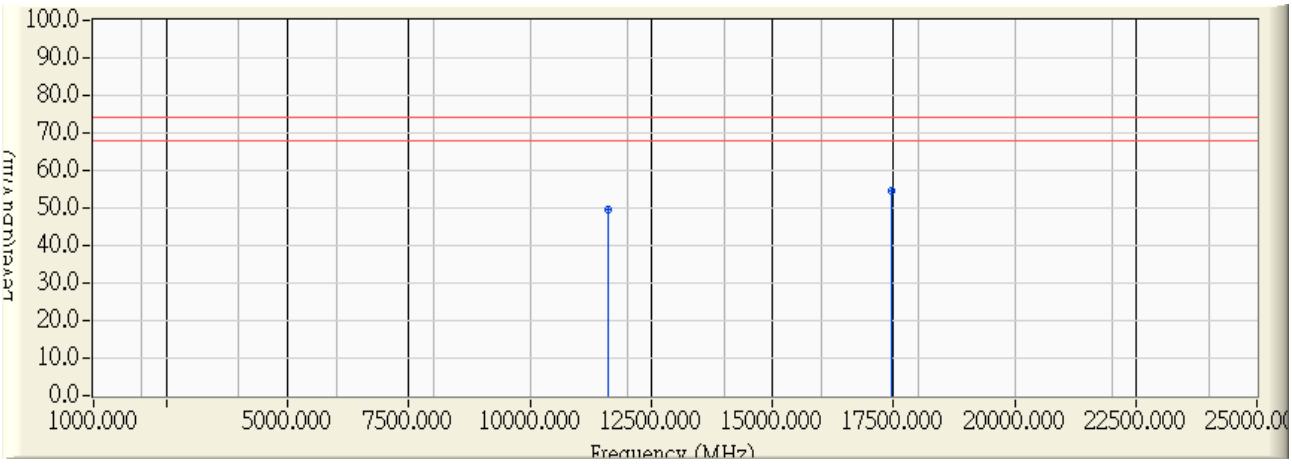


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17499.200	16.840	25.955	42.795	-11.205	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:25**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_5825MHz**

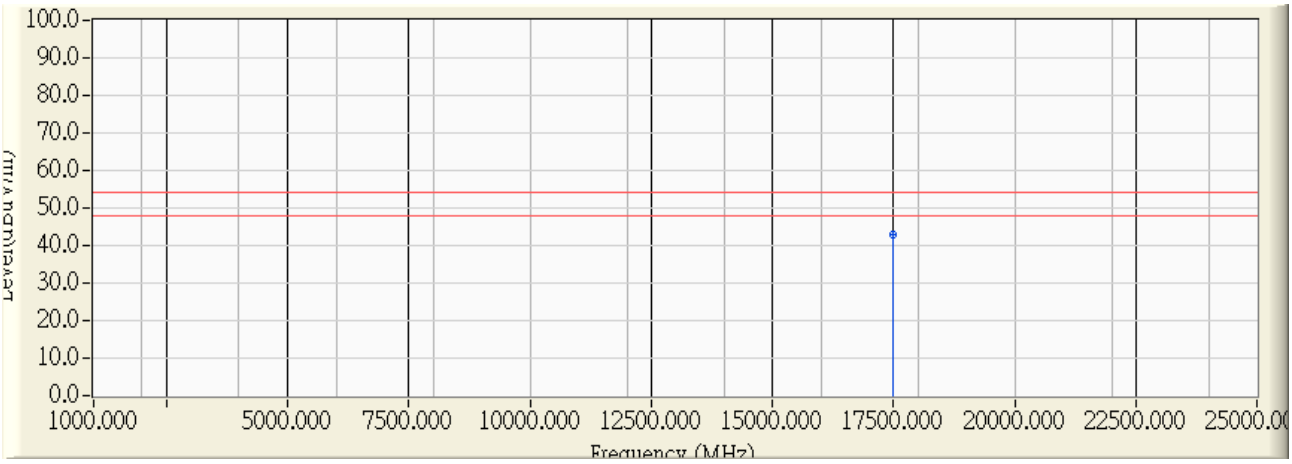


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11630.000	11.979	37.464	49.443	-24.557	54.000	74.000	PEAK
2	*	17463.000	16.668	37.911	54.578	-19.422	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:27**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_5825MHz**

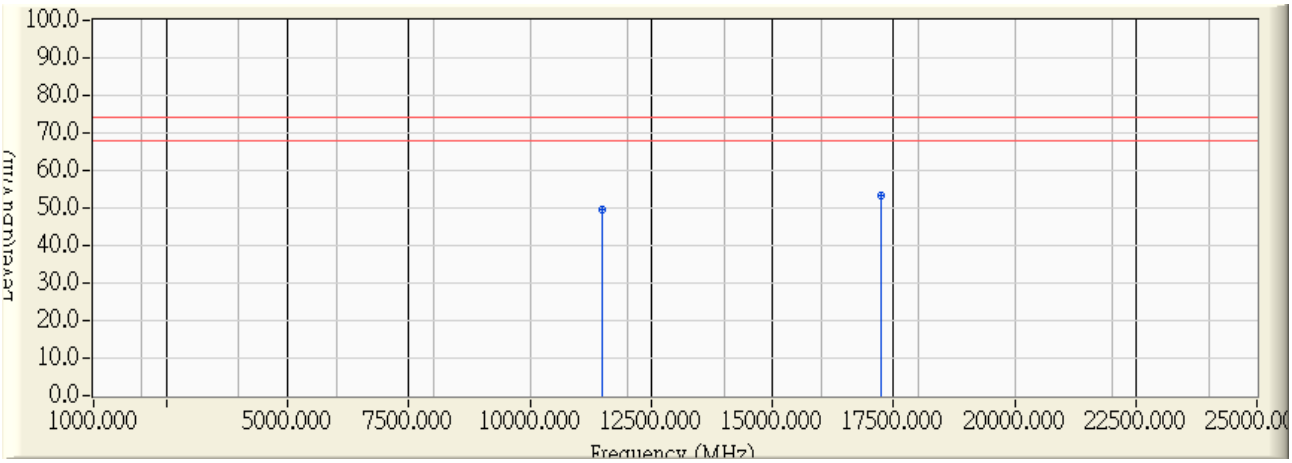


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17492.800	16.797	25.954	42.751	-11.249	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:01**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n20M_5745MHz**

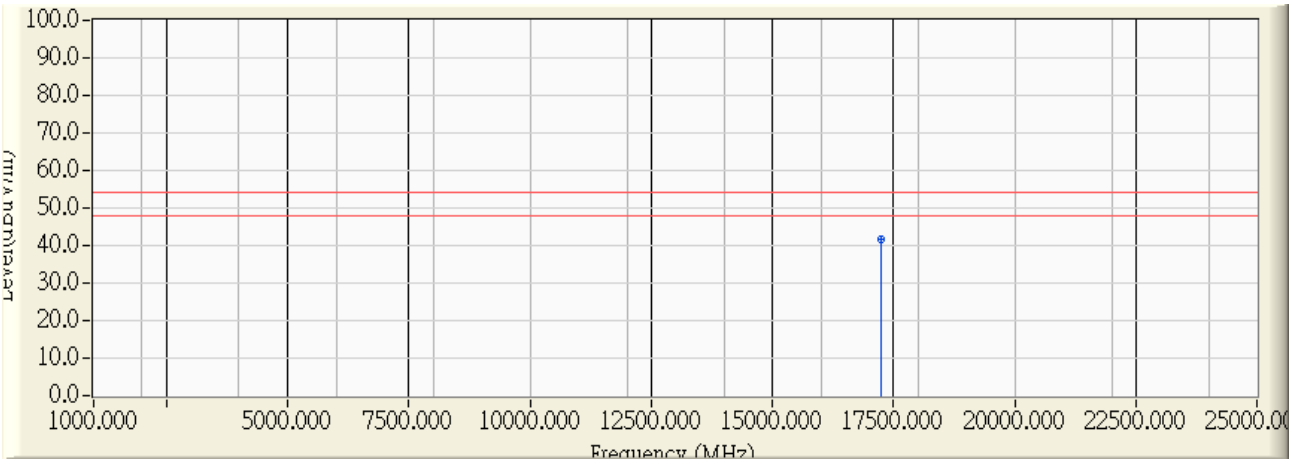


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11483.650	12.138	37.606	49.745	-24.255	54.000	74.000	PEAK
2	*	17257.050	15.830	37.599	53.429	-20.571	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:02**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n20M_5745MHz**

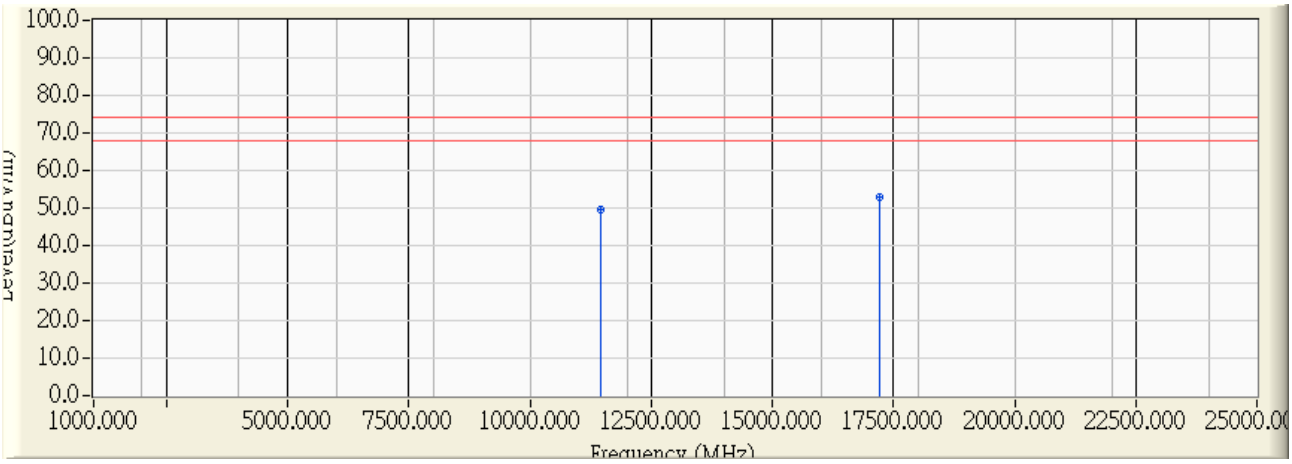


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17253.550	15.816	25.786	41.602	-12.398	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:04**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n20M_5745MHz**

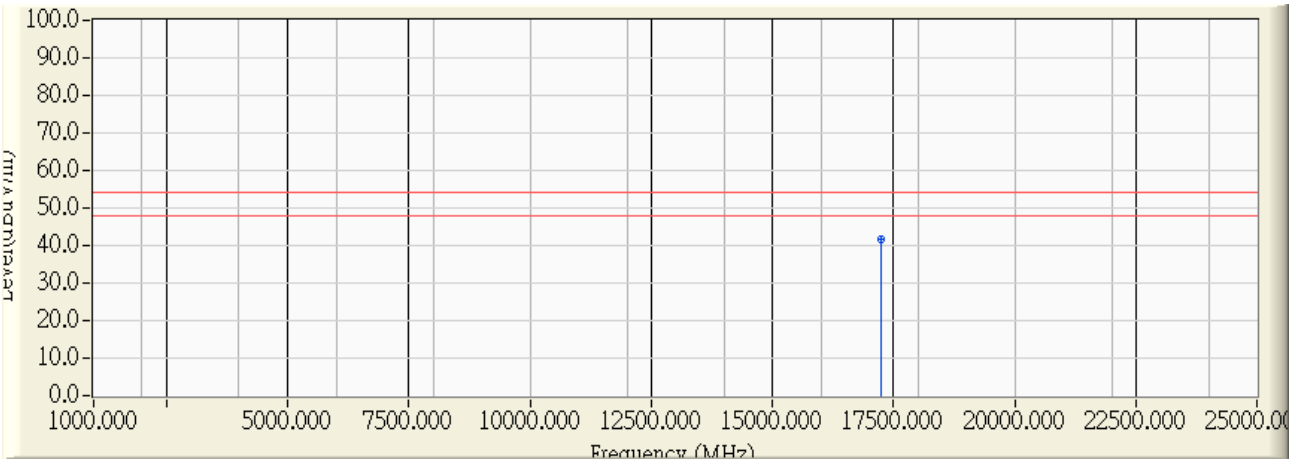


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11471.900	12.144	37.541	49.685	-24.315	54.000	74.000	PEAK
2	*	17226.550	15.706	37.416	53.122	-20.878	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:05**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n20M_5745MHz**

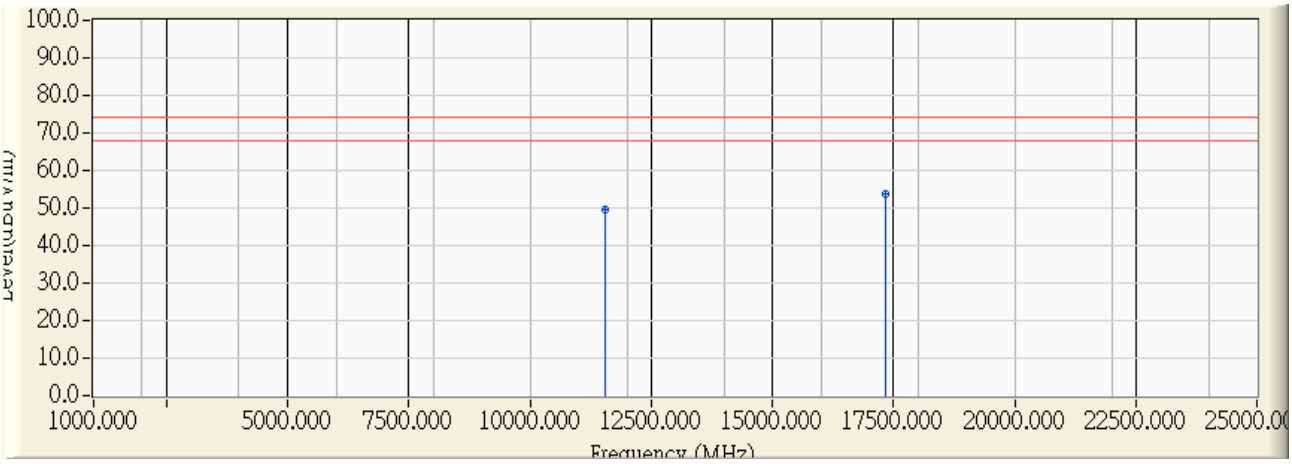


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17234.800	15.739	25.781	41.520	-12.480	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:13**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n20M_5785MHz**

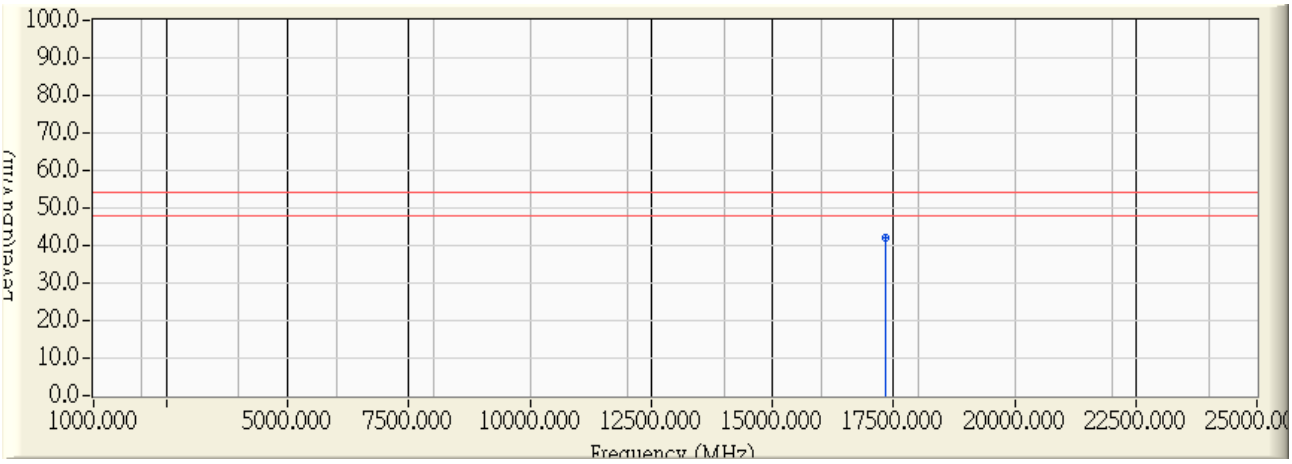


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11566.850	12.052	37.671	49.723	-24.277	54.000	74.000	PEAK
2	*	17340.850	16.171	37.384	53.555	-20.445	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:13**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n20M_5785MHz**

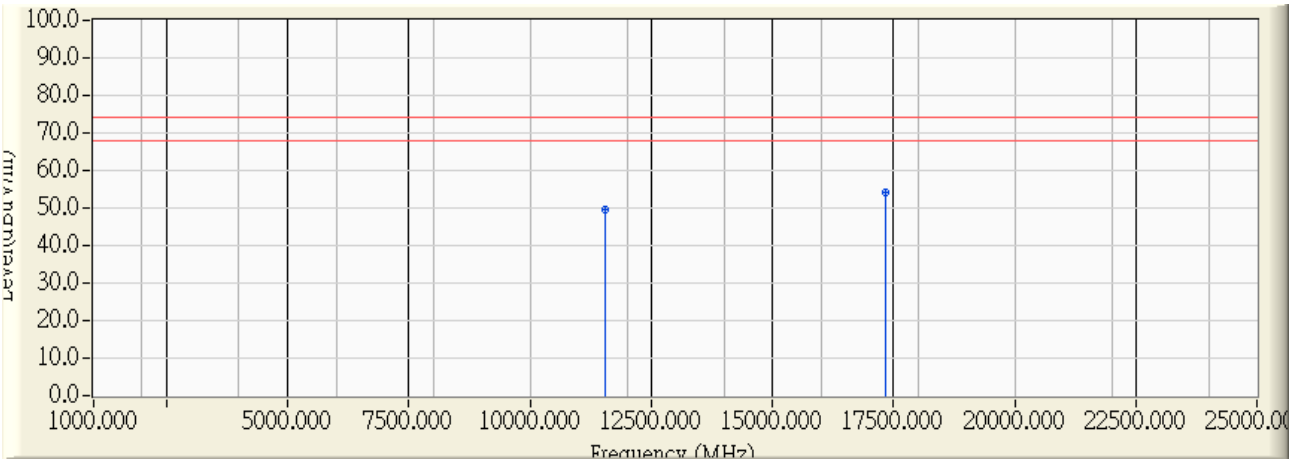


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17340.050	16.167	25.783	41.950	-12.050	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:08**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n20M_5785MHz**

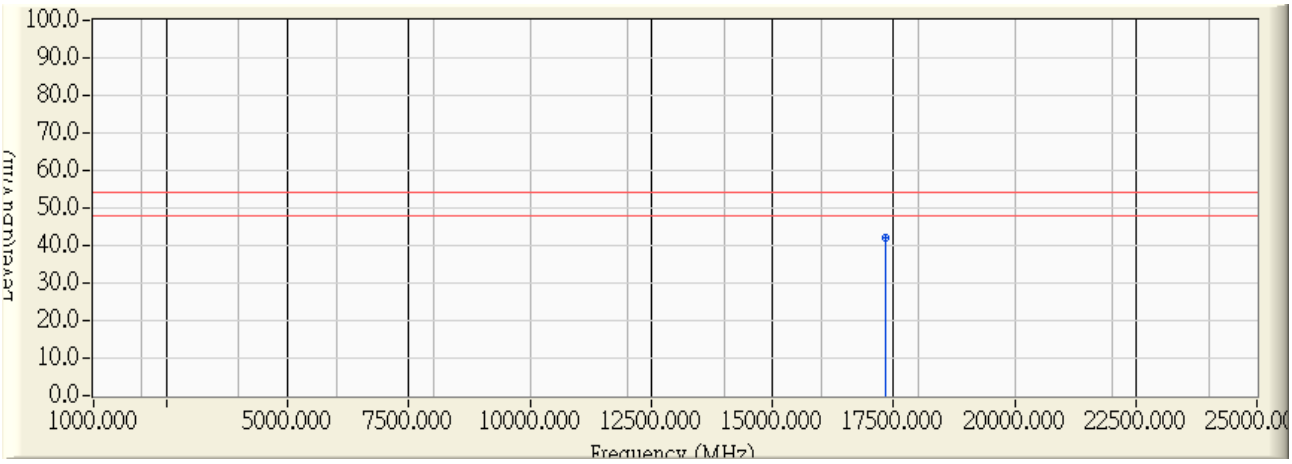


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11563.900	12.055	37.672	49.728	-24.272	54.000	74.000	PEAK
2	*	17336.500	16.153	38.046	54.199	-19.801	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:10**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n20M_5785MHz**

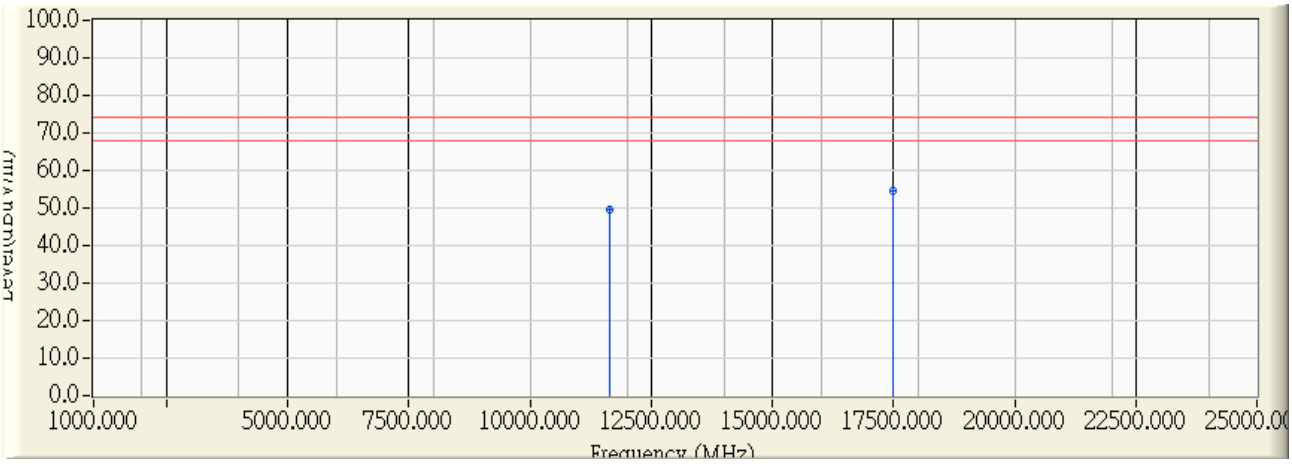


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17332.200	16.135	25.787	41.923	-12.077	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:34**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n20M_5825MHz**

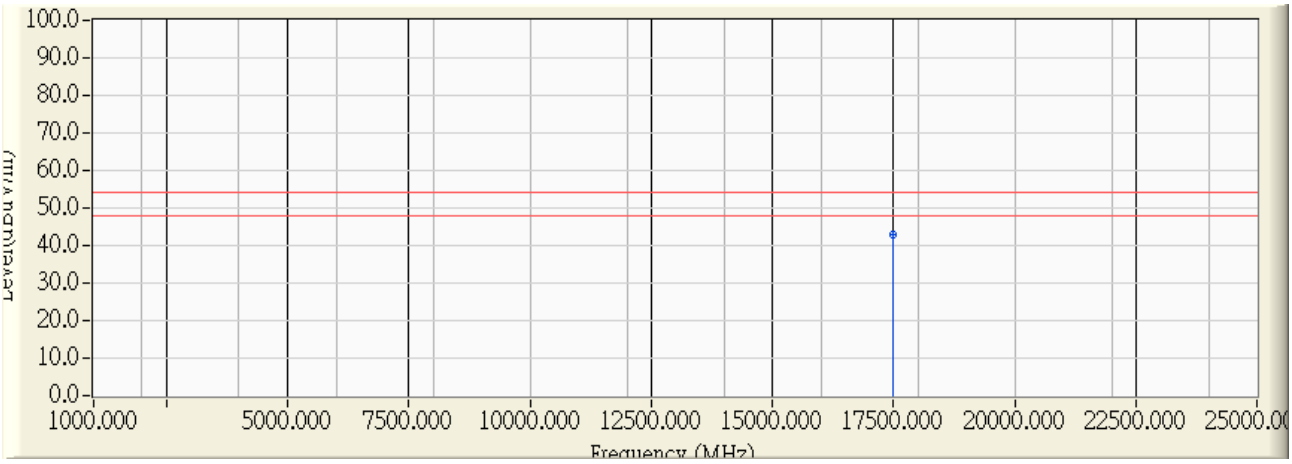


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11649.800	11.956	37.785	49.741	-24.259	54.000	74.000	PEAK
2	*	17480.350	16.738	38.019	54.757	-19.243	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:35**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n20M_5825MHz**

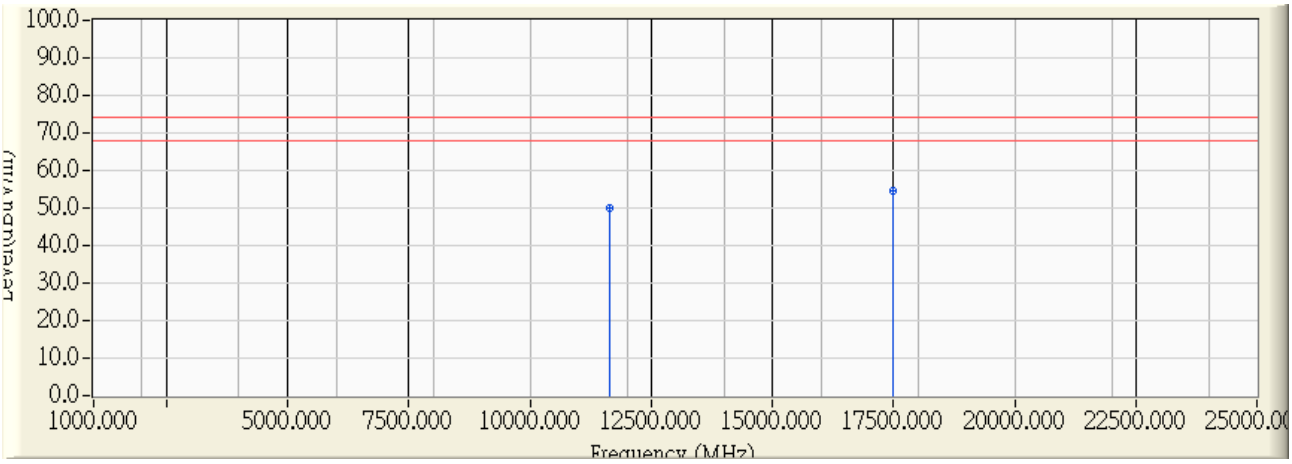


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17499.200	16.840	25.953	42.793	-11.207	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:38**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n20M_5825MHz**

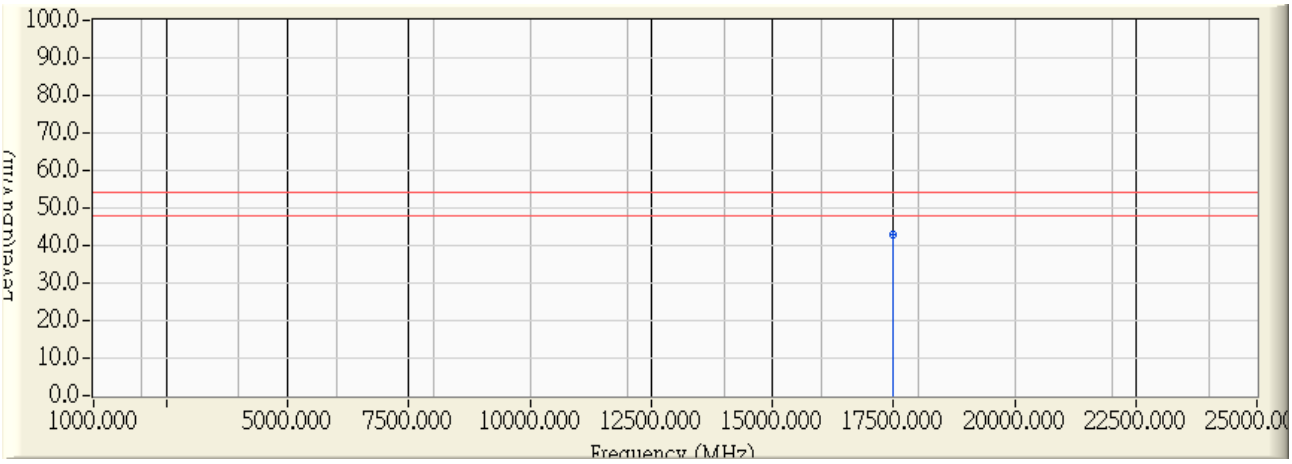


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11649.750	11.956	37.999	49.955	-24.045	54.000	74.000	PEAK
2	*	17499.550	16.843	37.873	54.716	-19.284	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:38**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n20M_5825MHz**

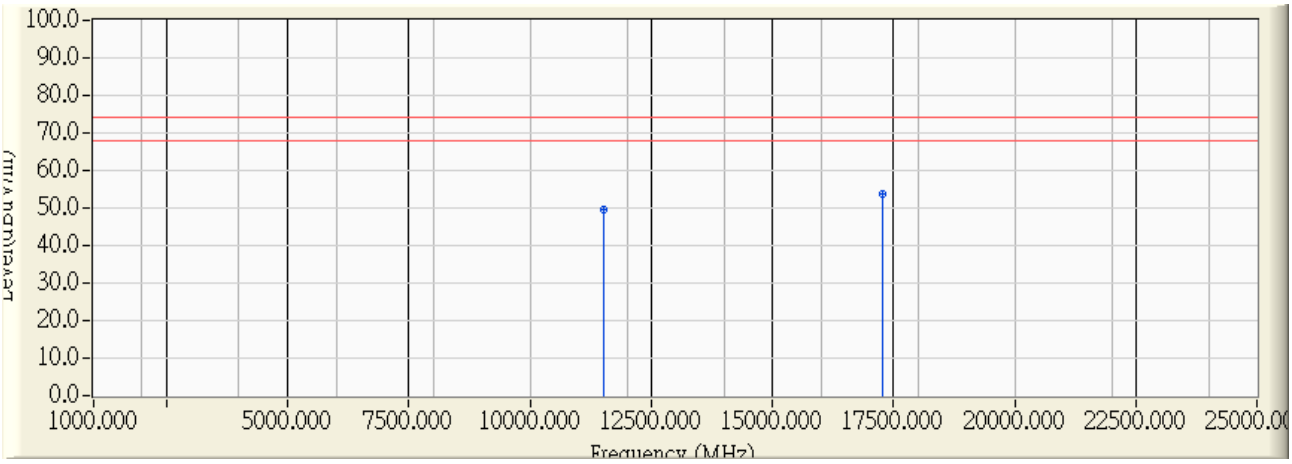


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17492.850	16.797	25.950	42.747	-11.253	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:47**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n40M_5755MHz**

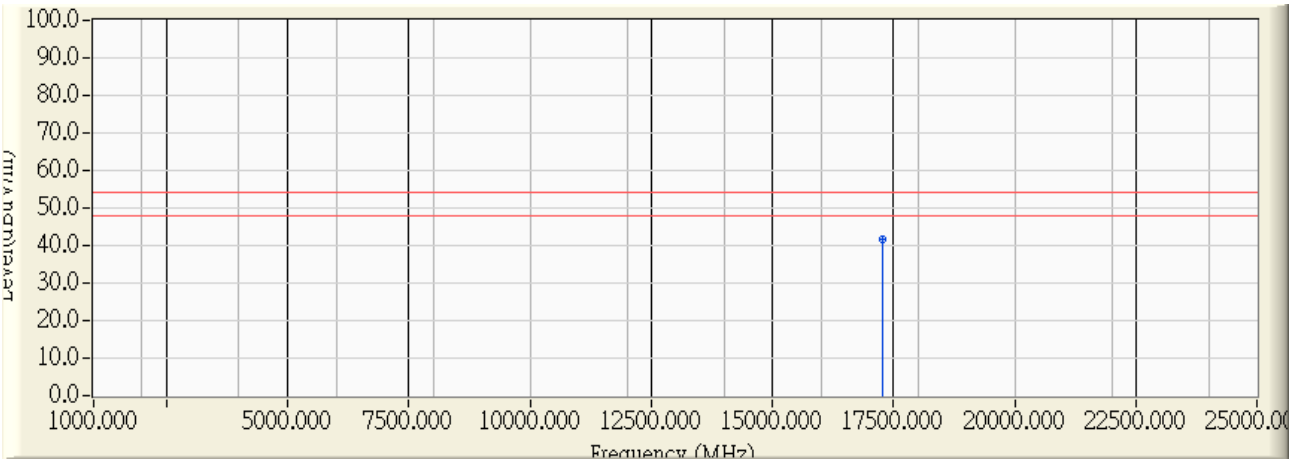


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11507.900	12.120	37.459	49.580	-24.420	54.000	74.000	PEAK
2	*	17263.750	15.857	37.736	53.593	-20.407	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:48**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n40M_5755MHz**

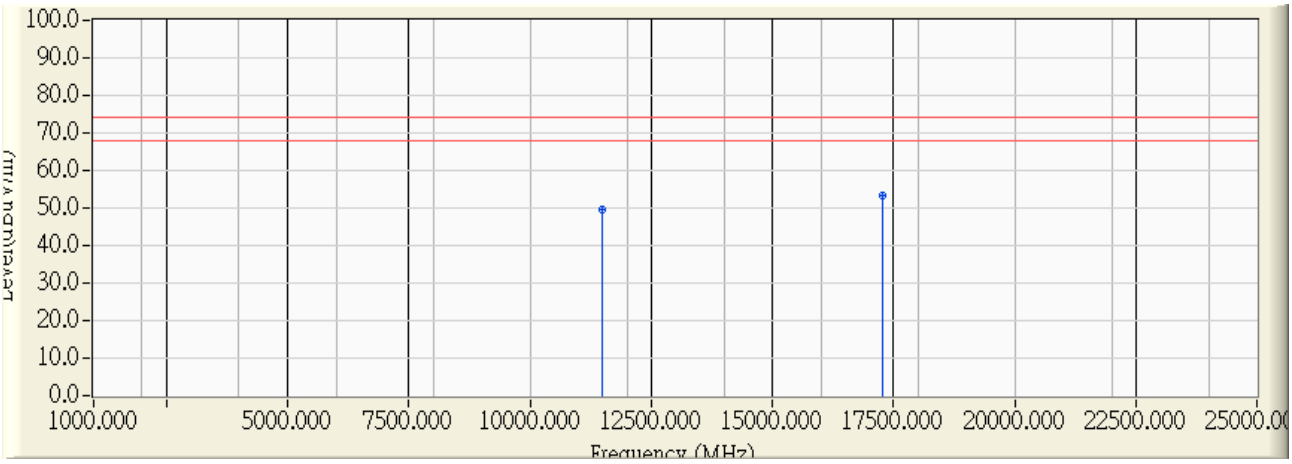


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17265.900	15.866	25.821	41.687	-12.313	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:43**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n40M_5755MHz**

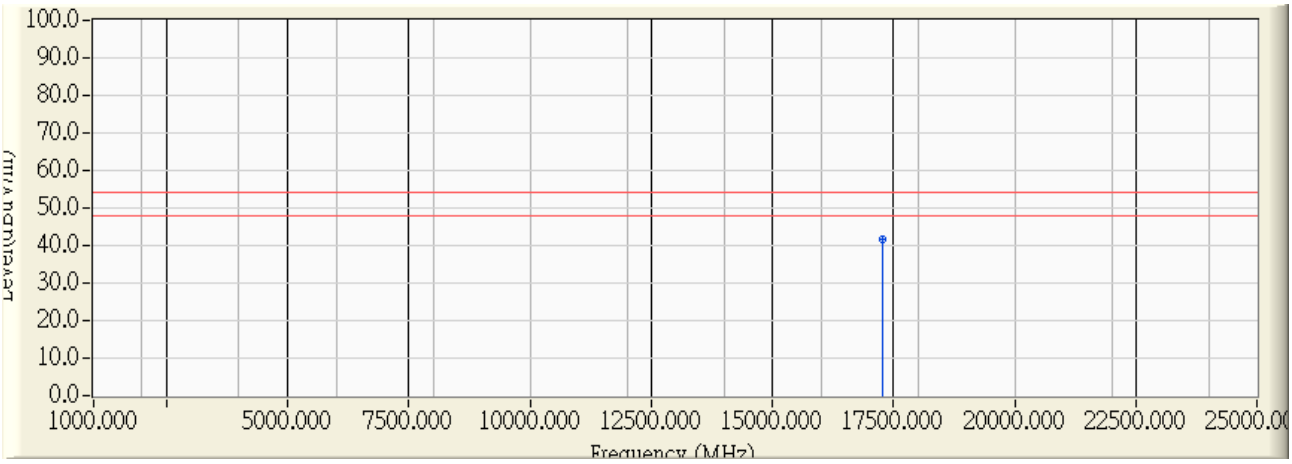


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11496.250	12.130	37.592	49.722	-24.278	54.000	74.000	PEAK
2	*	17274.750	15.902	37.452	53.354	-20.646	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:44**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n40M_5755MHz**

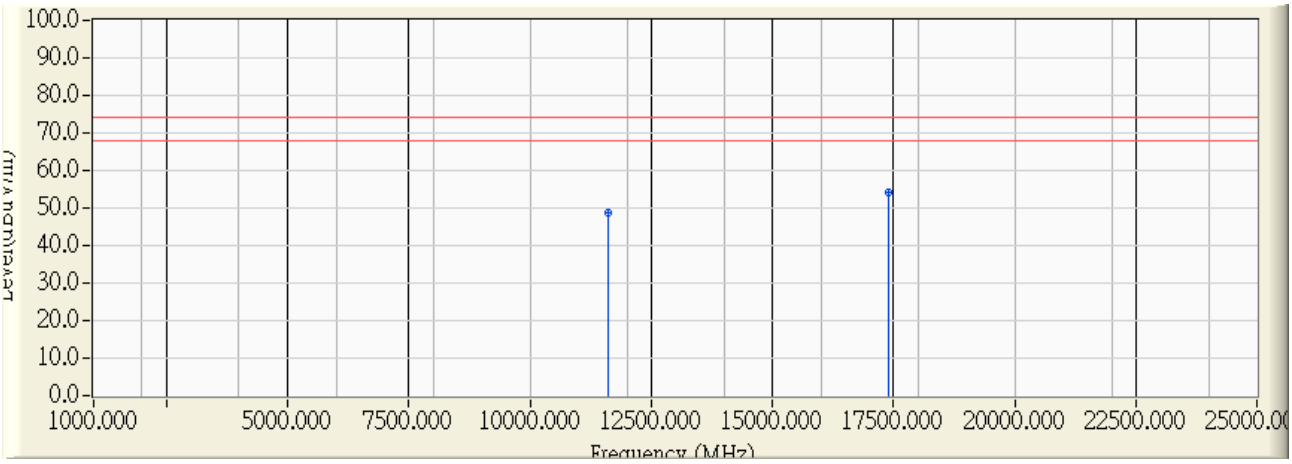


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17266.950	15.870	25.820	41.690	-12.310	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:54**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n40M_5795MHz**

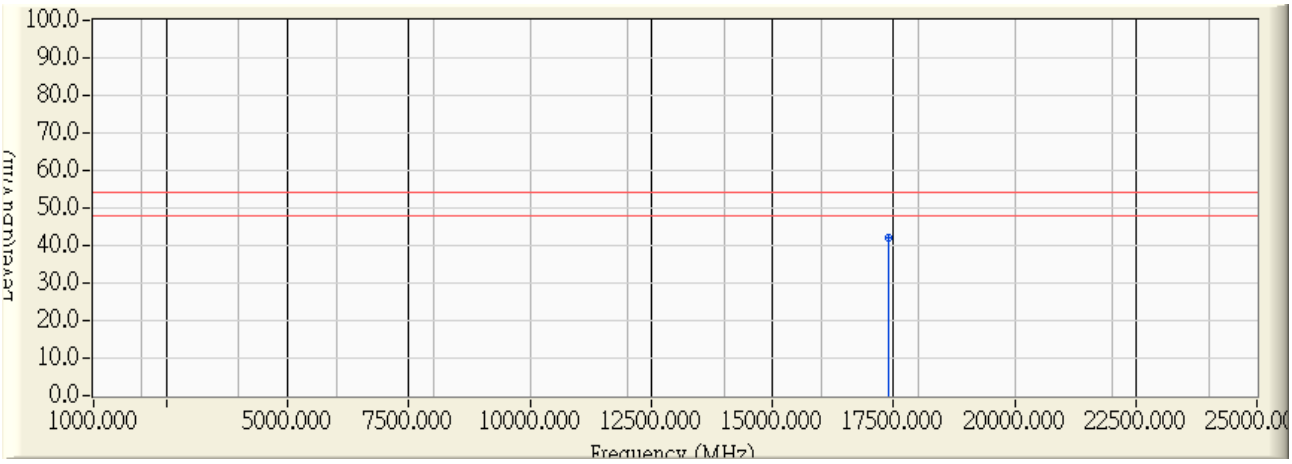


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11615.560	11.995	36.935	48.931	-25.069	54.000	74.000	PEAK
2	*	17402.040	16.420	37.626	54.046	-19.954	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:55**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n40M_5795MHz**

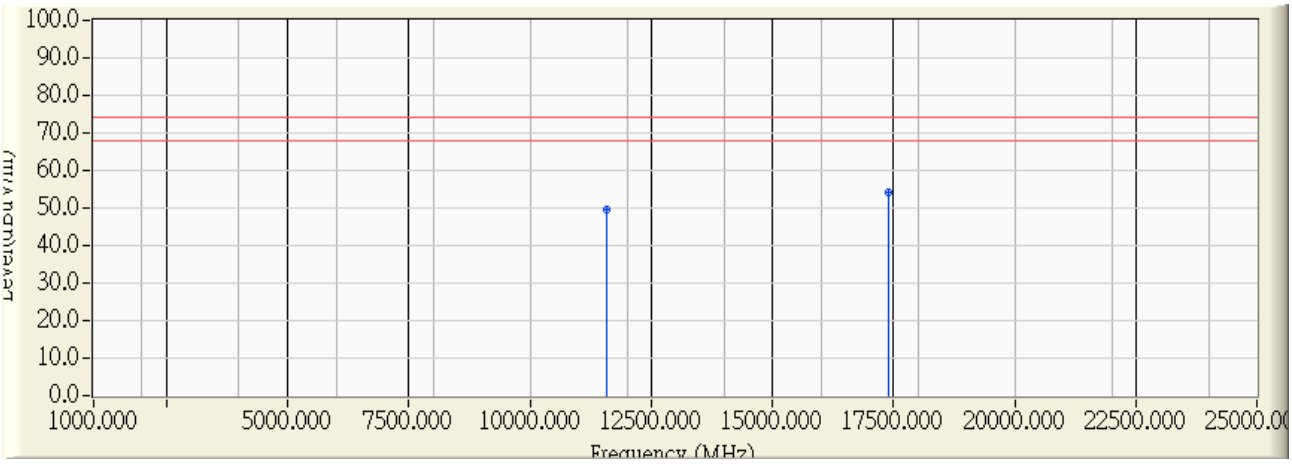


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17412.720	16.463	25.803	42.266	-11.734	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:57**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n40M_5795MHz**

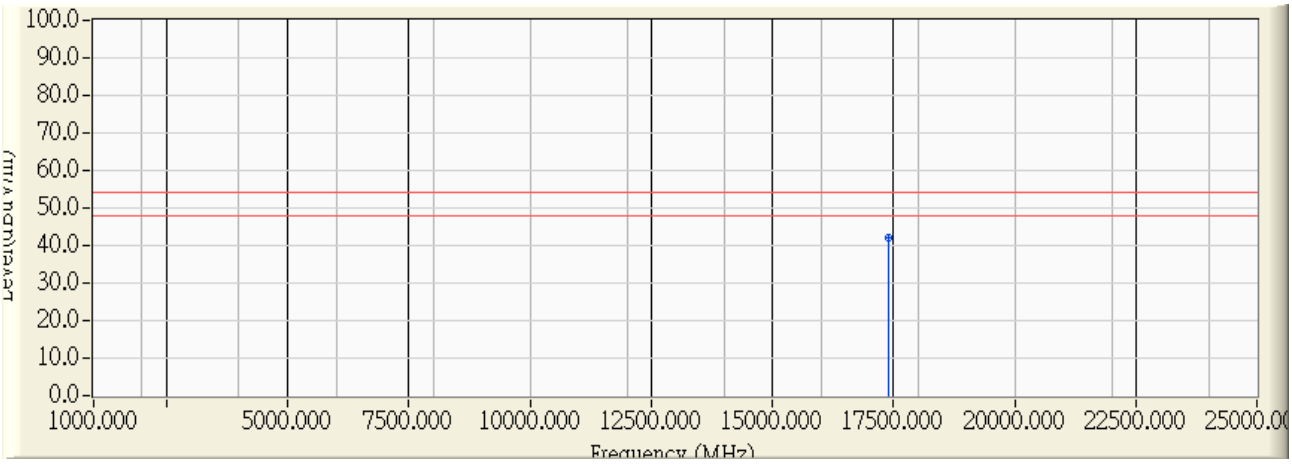


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11586.700	12.029	37.592	49.621	-24.379	54.000	74.000	PEAK
2	*	17391.480	16.376	37.673	54.050	-19.950	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/05/07 - 10:58**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n40M_5795MHz**

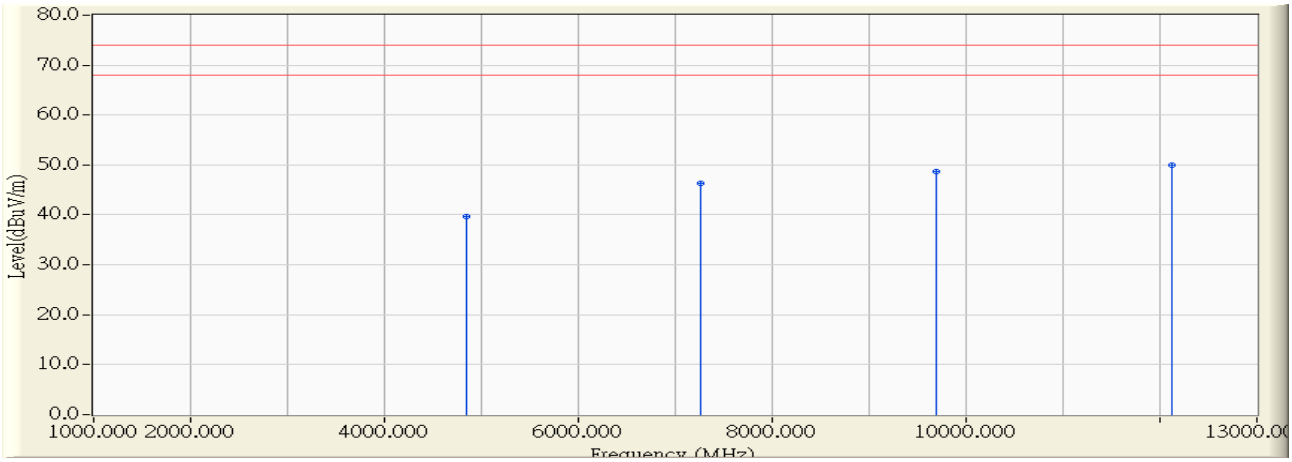


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17414.760	16.471	25.786	42.257	-11.743	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 18:49**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n40M_2422MHz_Co-location**

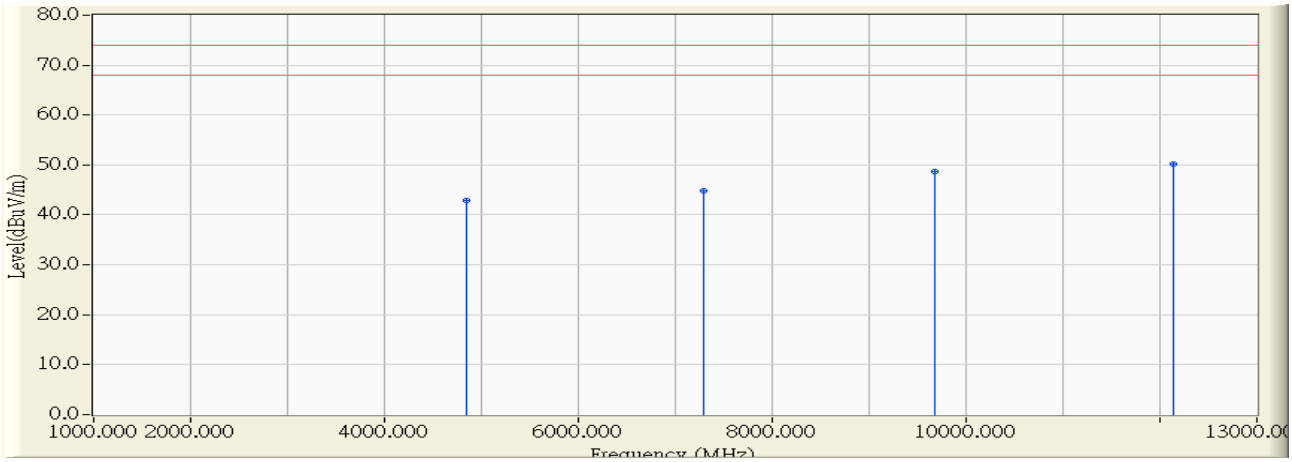


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		4850.750	-0.733	40.410	39.677	-34.323	54.000	74.000	PEAK
2	*	7268.080	5.573	40.820	46.394	-27.606	54.000	74.000	PEAK
3		9687.000	9.514	39.070	48.583	-25.417	54.000	74.000	PEAK
4		12117.330	11.505	38.430	49.935	-24.065	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/08/23 - 18:54**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11n40M_2422MHz_Co-location**

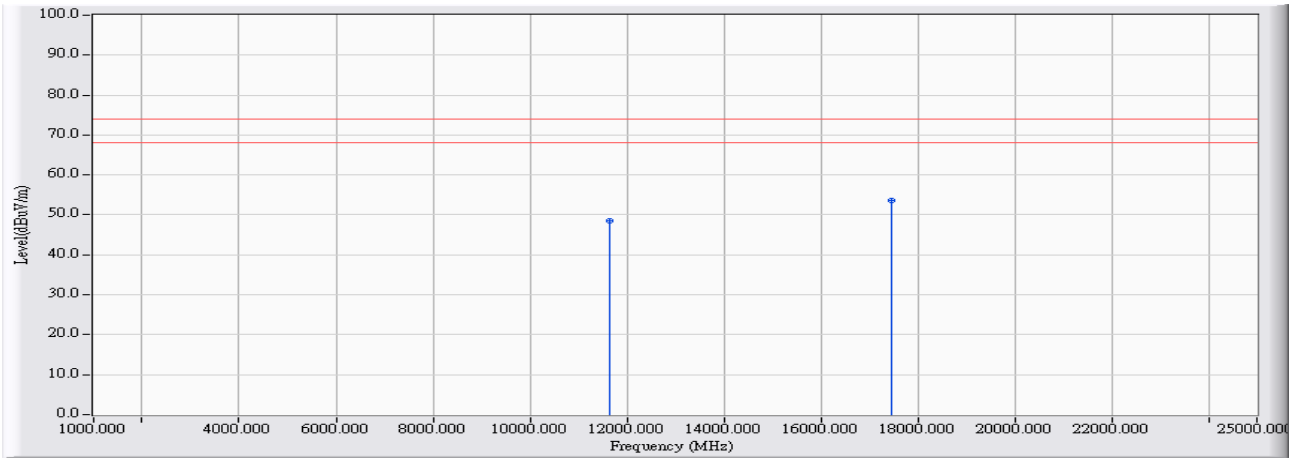


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		4839.830	-0.761	43.700	42.938	-31.062	54.000	74.000	PEAK
2		7285.830	5.617	39.270	44.887	-29.113	54.000	74.000	PEAK
3		9672.330	9.407	39.300	48.707	-25.293	54.000	74.000	PEAK
4	*	12130.920	11.501	38.770	50.270	-23.730	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/11/20 - 17:23**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_5785MHz_Co-location**

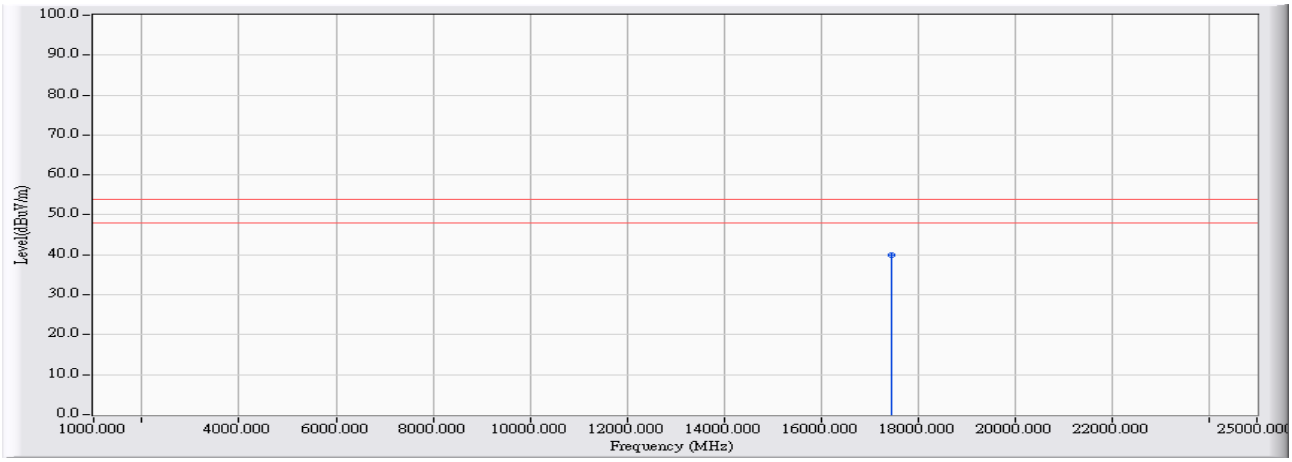


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11645.220	12.586	35.891	48.476	-25.524	54.000	74.000	PEAK
2	*	17460.260	17.221	36.366	53.586	-20.414	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/11/20 - 17:25**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - HORIZONTAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_5785MHz_Co-location**

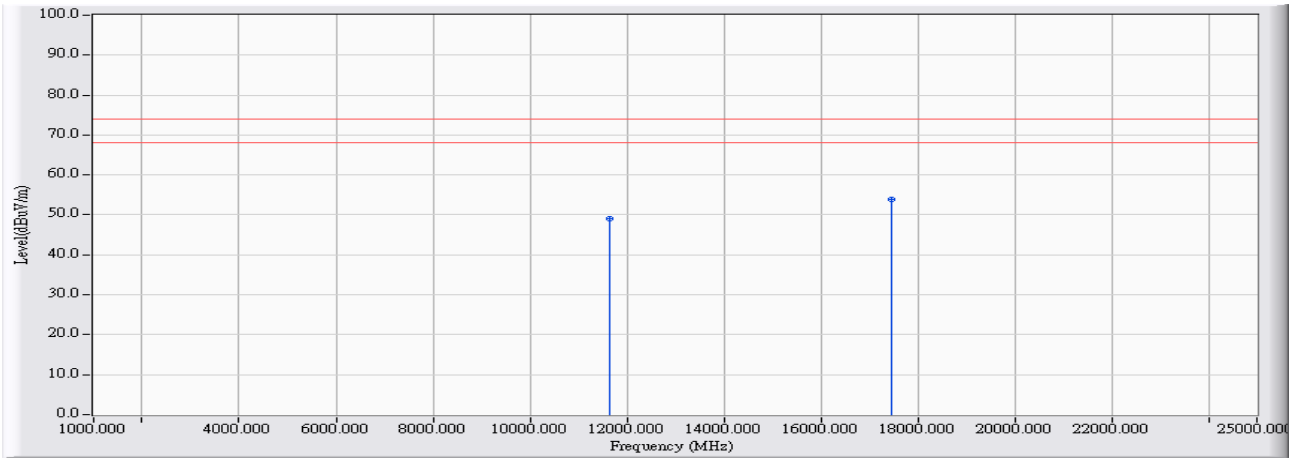


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17465.020	17.240	22.753	39.993	-14.007	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/11/20 - 17:31**
Limit : FCC_SpartC_15.247_H_03M_PK	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_5785MHz_Co-location**

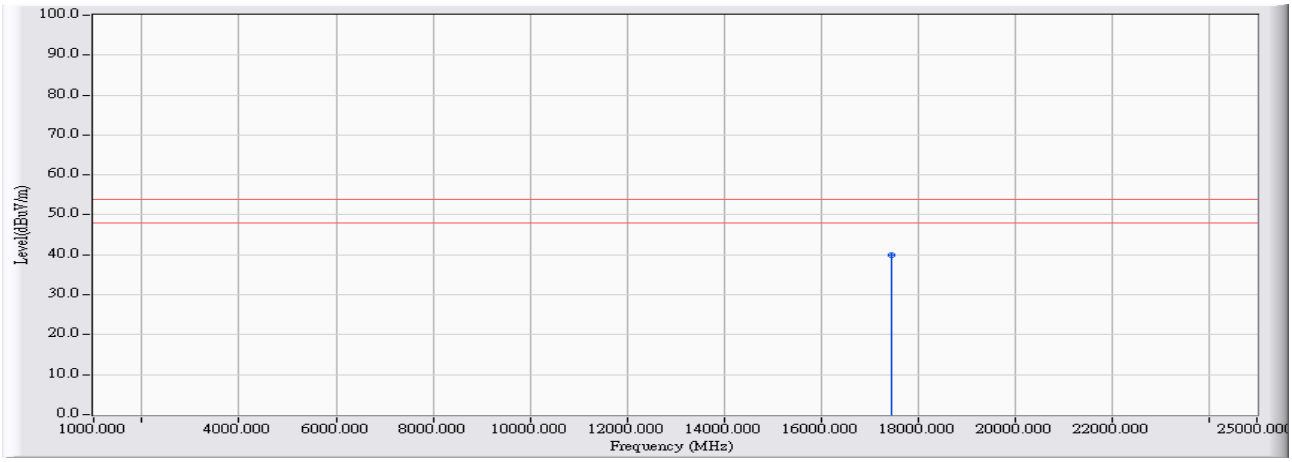


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1		11649.400	12.575	36.572	49.146	-24.854	54.000	74.000	PEAK
2	*	17467.460	17.249	36.707	53.957	-20.043	54.000	74.000	PEAK

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

Site : CB1	**Time : 2013/11/20 - 17:36**
Limit : FCC_SpartC_15.247_H_03M_AV	**Margin : 6**
Probe : CB1_FCC_EFS_1-18G-1_0901 - VERTICAL	**Power : AC 120V/60Hz**
EUT : VDSL2 Security Firewall	**Note : Mode 1: Transmit (Adapter: PA1030-21)802.11a_5785MHz_Co-location**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Average Limit (dBuV/m)	Peak Limit (dBuV/m)	Detector Type
1	*	17466.040	17.244	22.756	40.000	-14.000	54.000	74.000	AVERAGE

Note:

1. All readings above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. " * ", means this data is the worst emission level.
5. Measurement Level = Reading Level + Correct Factor.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The Emission above 18GHz were not included is because their levels are too low.

5. RF antenna conducted test

5.1. Test Equipment

The following test equipments are used during the test:

RF antenna conducted test / SR7 (For 2.4G)

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2014/08/05

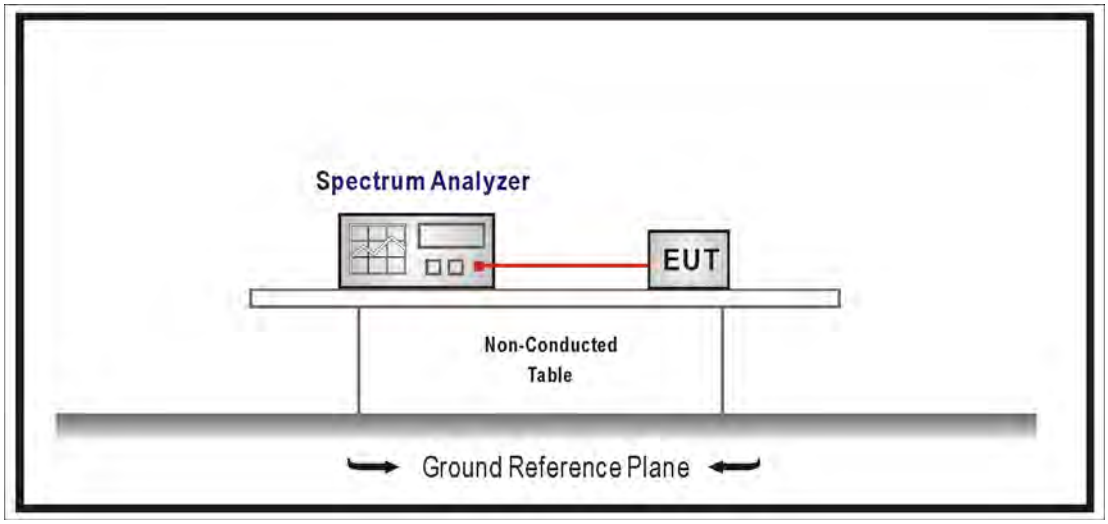
RF antenna conducted test / SR7 (For 5.8G)

Instrument	Manufacturer	Model No.	Serial No	Next Cal. Date
Spectrum Analyzer	Agilent	N9010A-EXA	US47140172	2013/07/31

Note: 1. All equipments that need to calibrate are with calibration period of 1 year.

5.2. Test Setup

RF Antenna Conducted Measurement:



5.3. Limits

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

5.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2009 and tested according to DTS test procedure of KDB558074 for compliance to FCC 47CFR 15.247 requirements
Set RBW = 100 kHz, Set VBW> RBW, scan up through 10th harmonic.

5.5. Test Specification

According to FCC Part 15 Subpart C Paragraph 15.247: 2012

5.6. Uncertainty

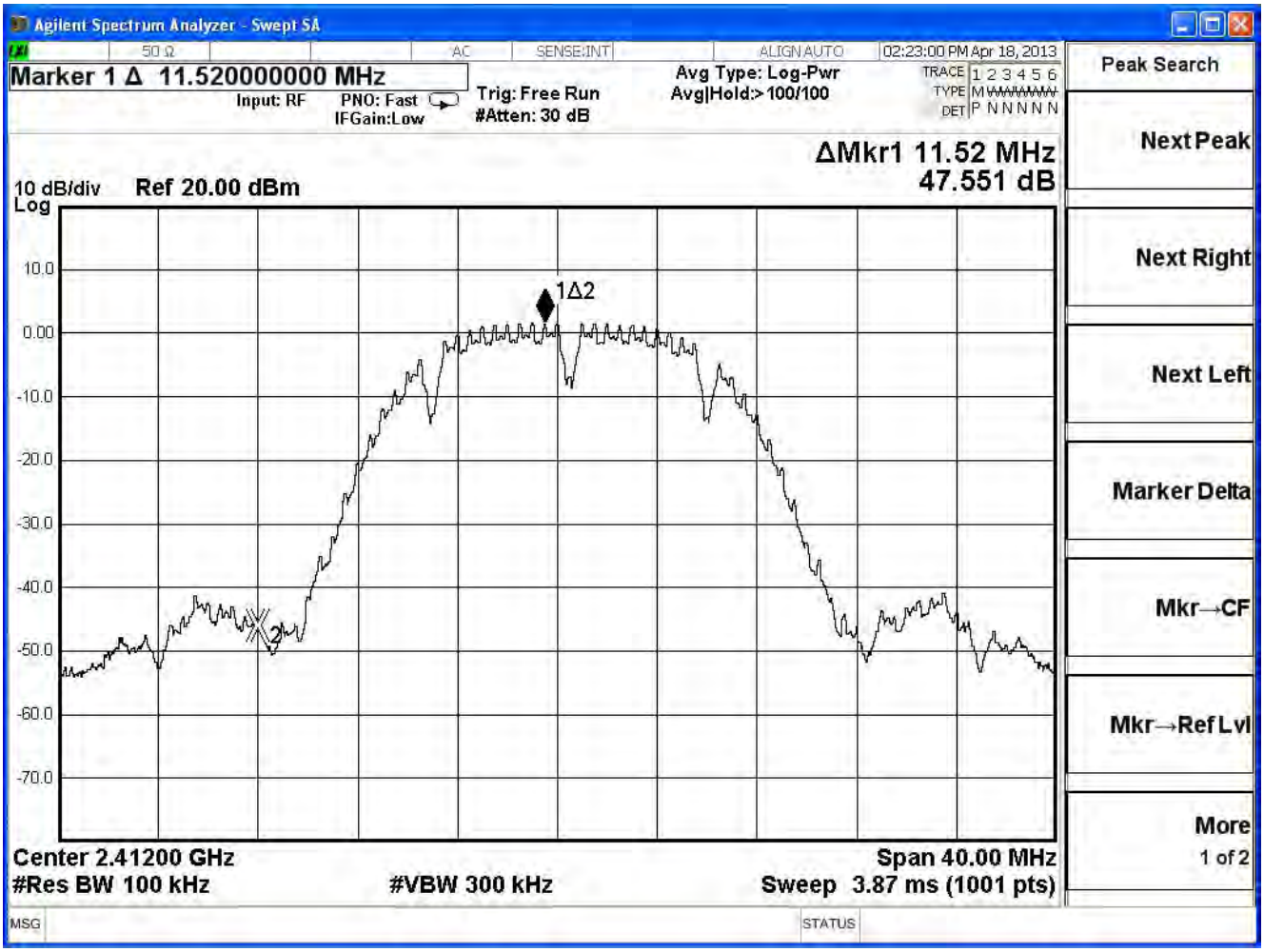
Conducted is defined as ± 1.27dB

5.7. Test Result

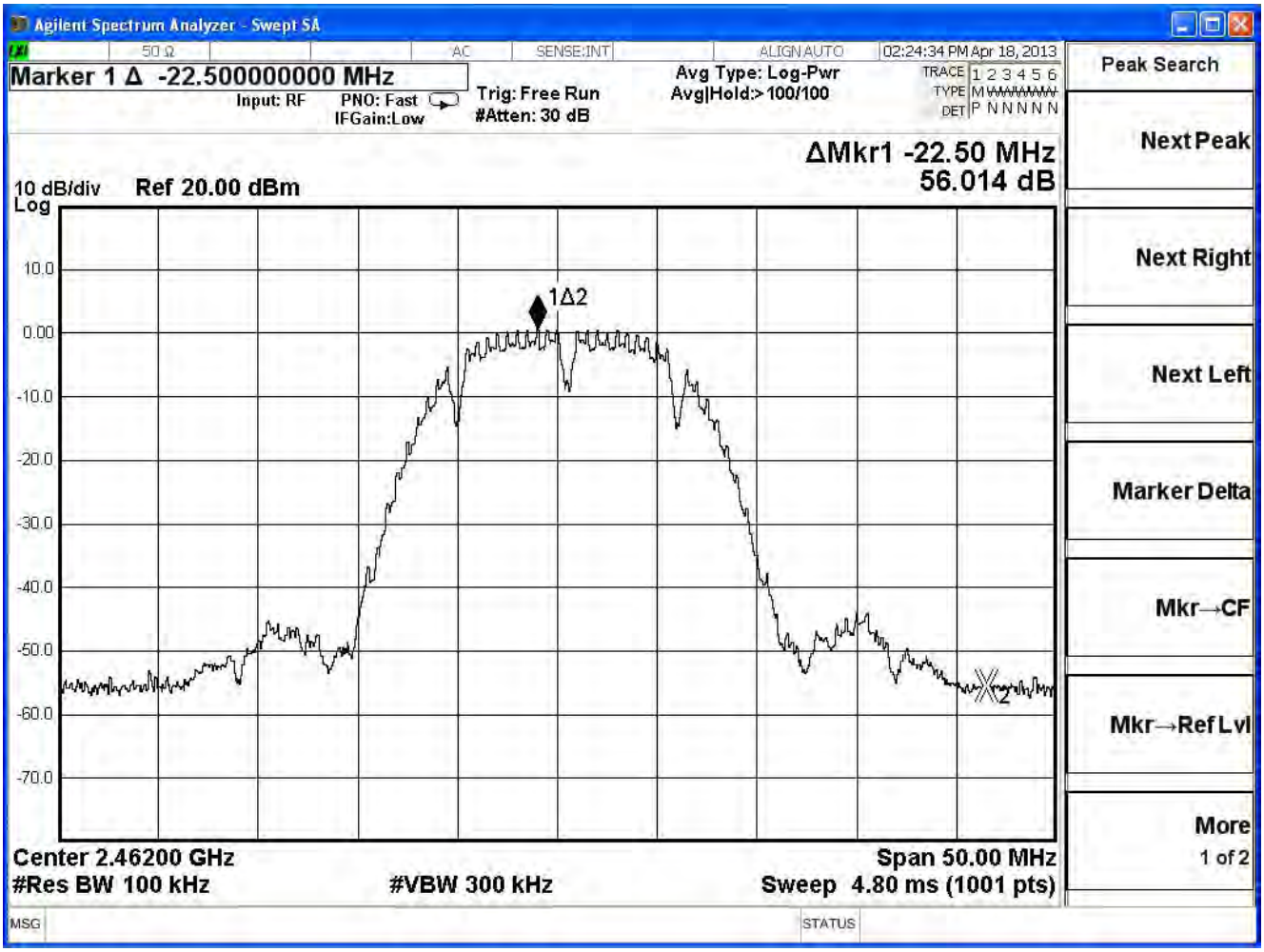
Product	VDSL2 Security Firewall		
Test Item	RF antenna conducted test		
Test Mode	Transmit		
Date of Test	2013/06/18	Test Site	SR7

IEEE 802.11b, Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	47.551	≧20	Pass
11	2462	56.014	≧20	Pass

Channel 01 (2412MHz)



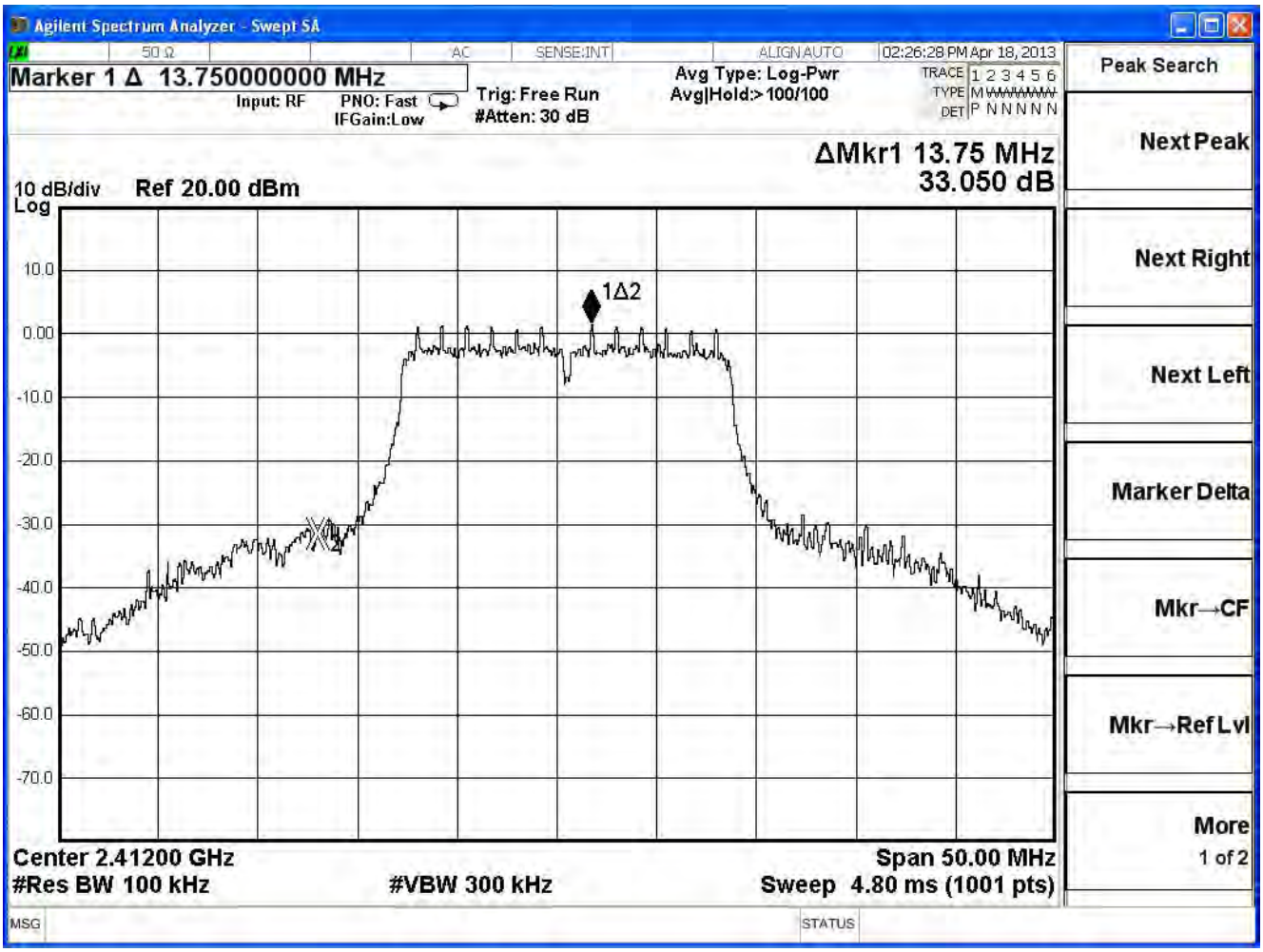
Channel 11 (2462MHz)



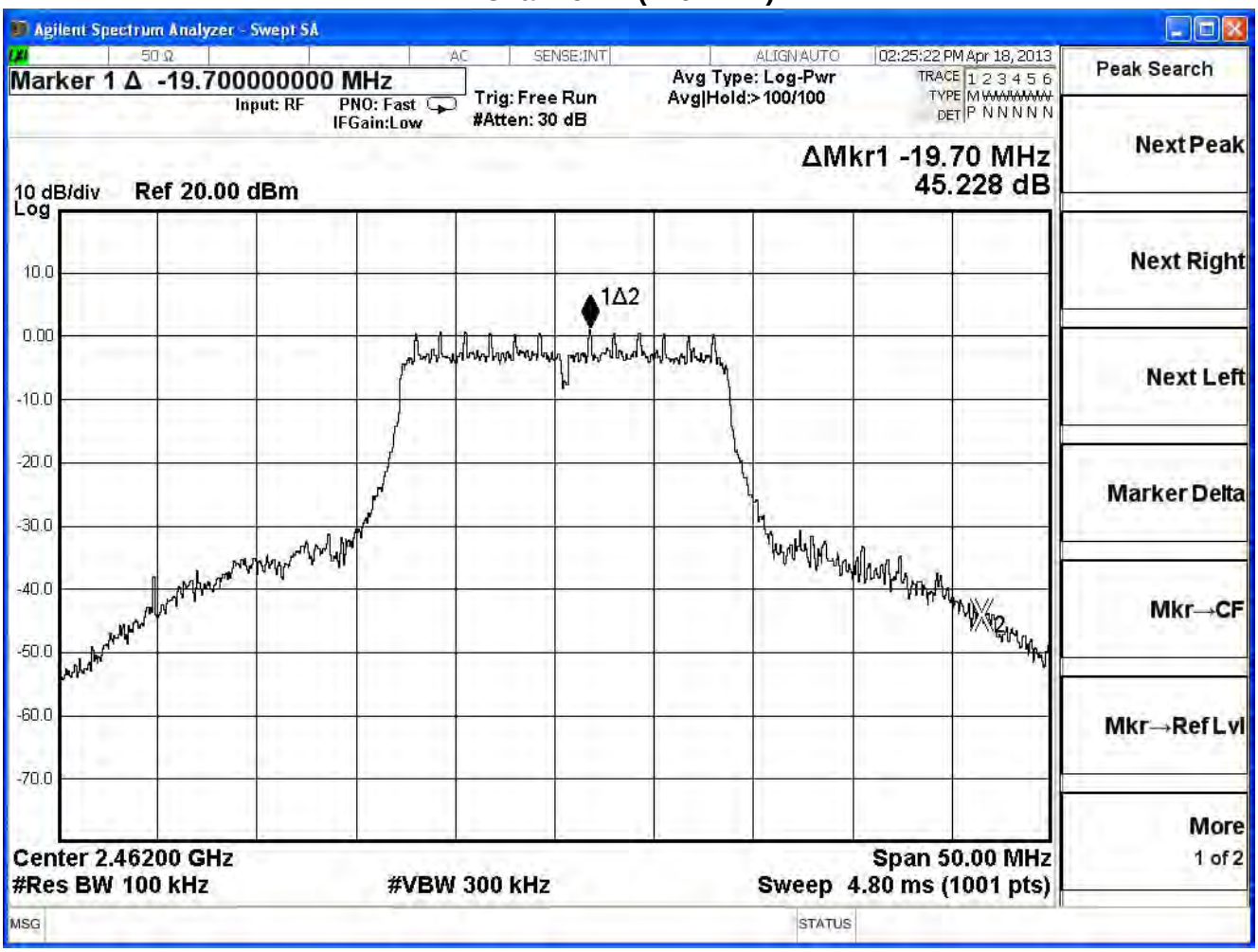
Product	VDSL2 Security Firewall		
Test Item	RF antenna conducted test		
Test Mode	Transmit		
Date of Test	2013/06/18	Test Site	SR7

IEEE 802.11g, Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	33.050	≧20	Pass
11	2462	45.228	≧20	Pass

Channel 01 (2412MHz)



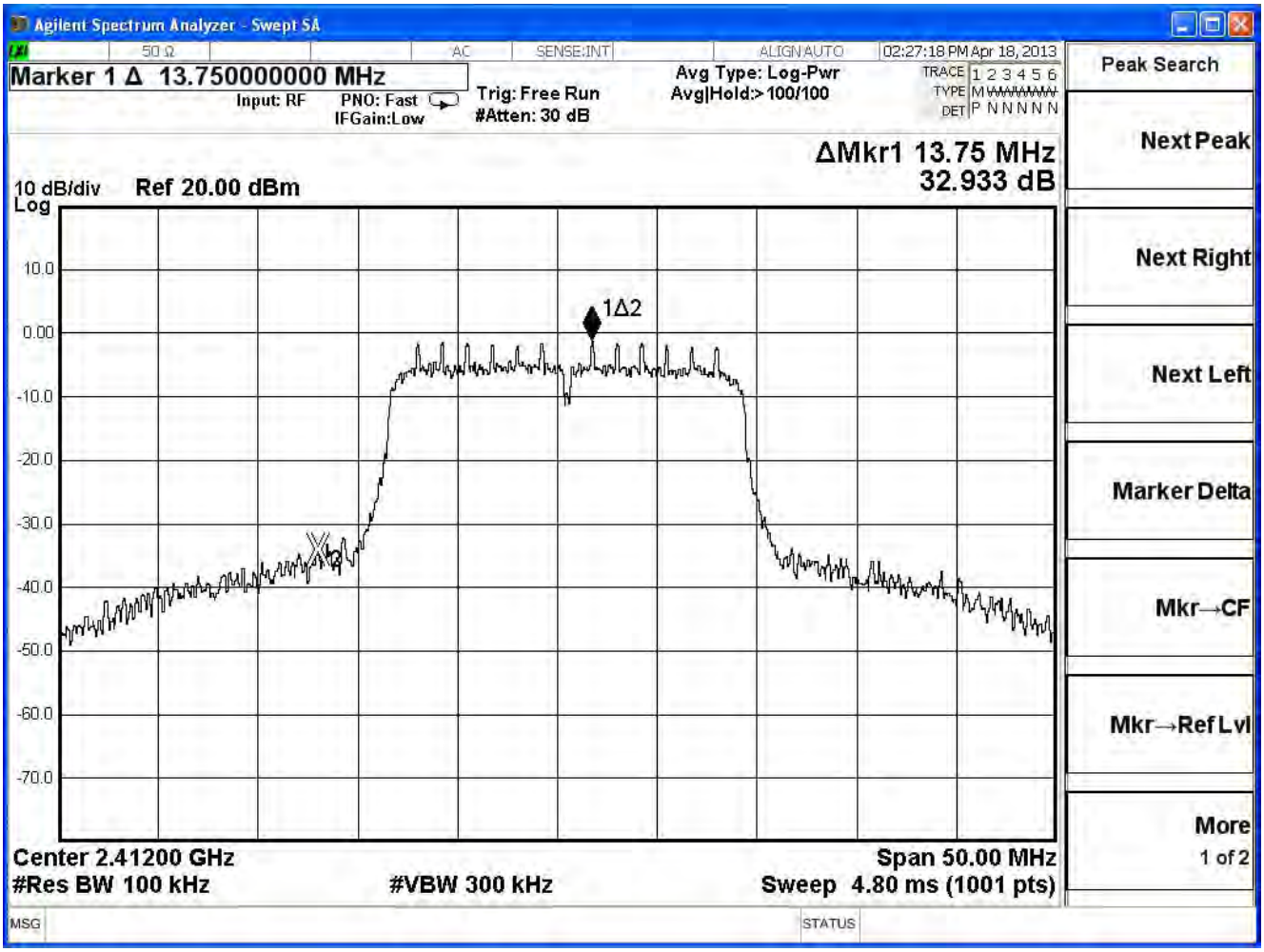
Channel 11 (2462MHz)



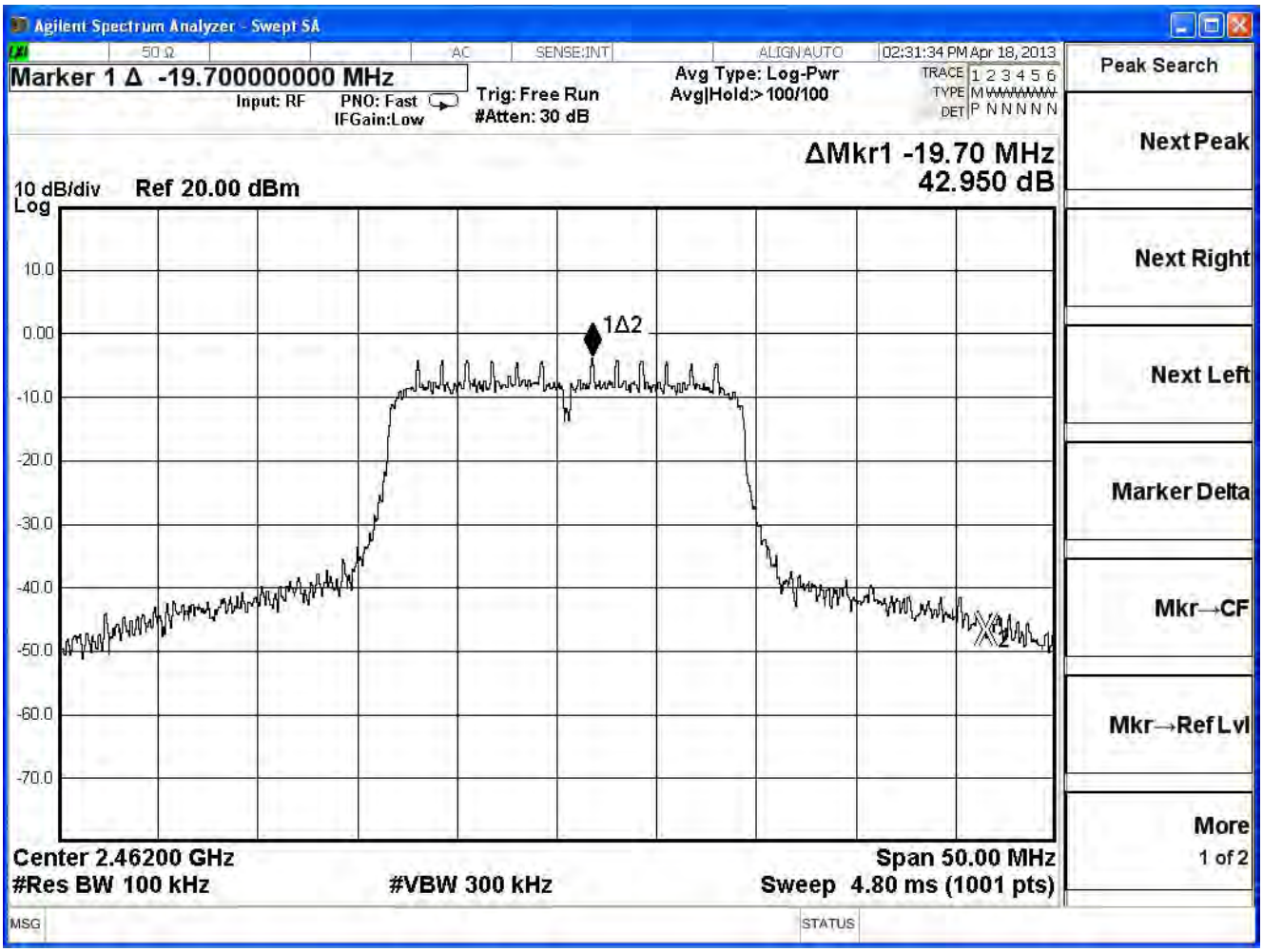
Product	VDSL2 Security Firewall		
Test Item	RF antenna conducted test		
Test Mode	Transmit		
Date of Test	2013/06/18	Test Site	SR7

IEEE 802.11n (20MHz), (ANT 0) , Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	32.933	≧20	Pass
11	2462	42.950	≧20	Pass

Channel 1 (2412MHz)



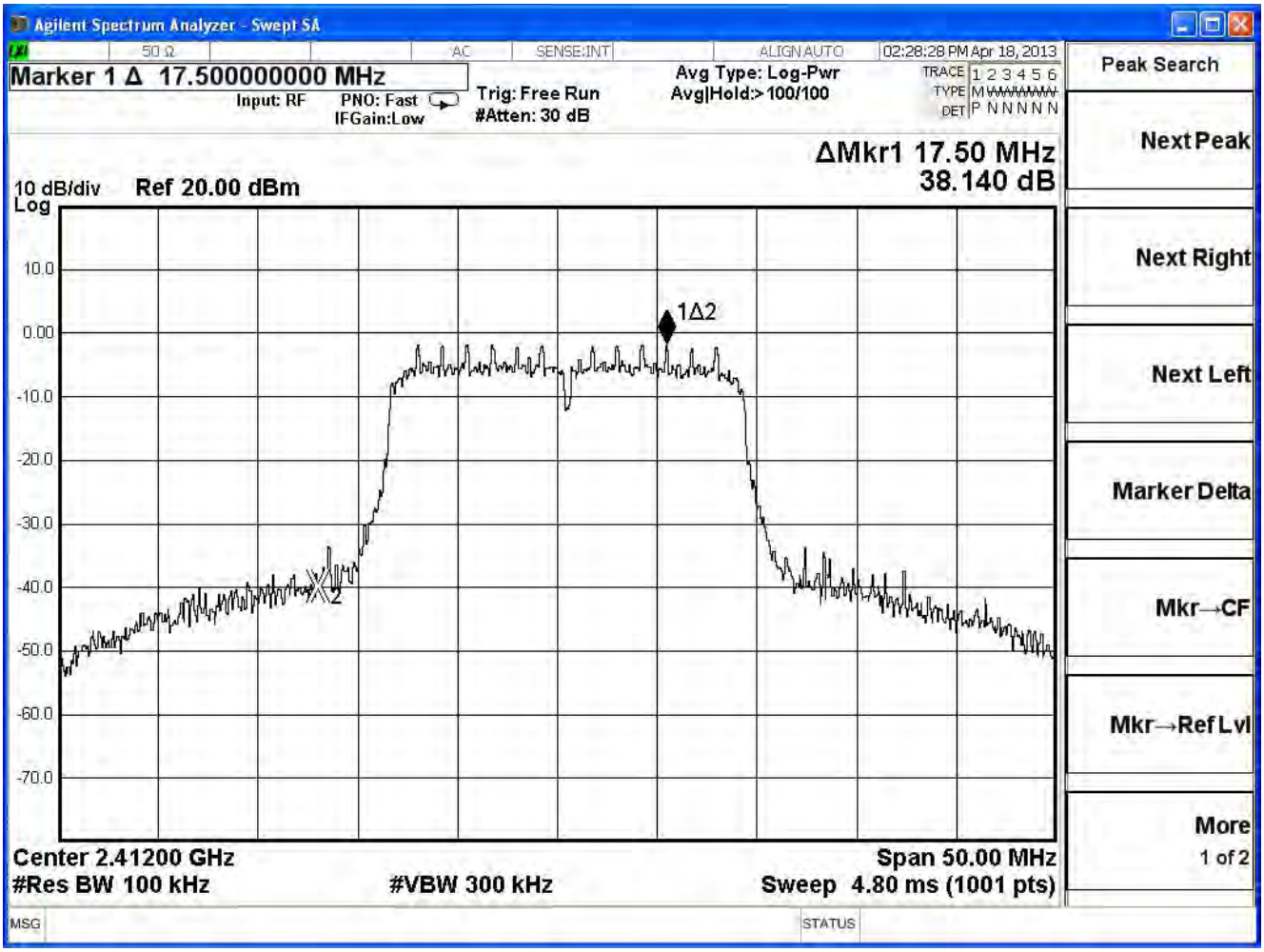
Channel 11 (2462MHz)



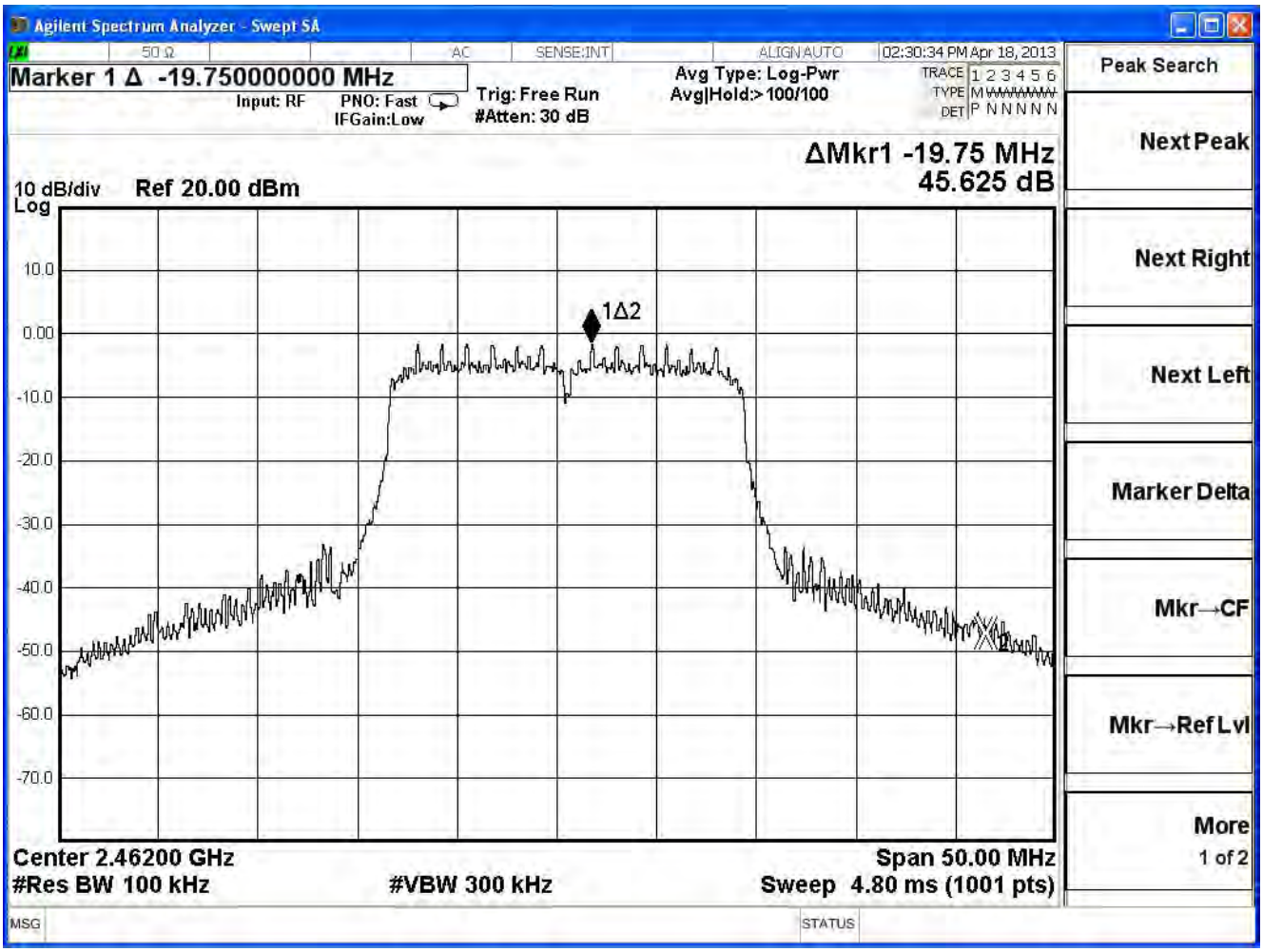
Product	VDSL2 Security Firewall		
Test Item	RF antenna conducted test		
Test Mode	Transmit		
Date of Test	2013/06/18	Test Site	SR7

IEEE 802.11n (20MHz), (ANT 1) , Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
1	2412	38.140	≧20	Pass
11	2462	45.625	≧20	Pass

Channel 1 (2412MHz)



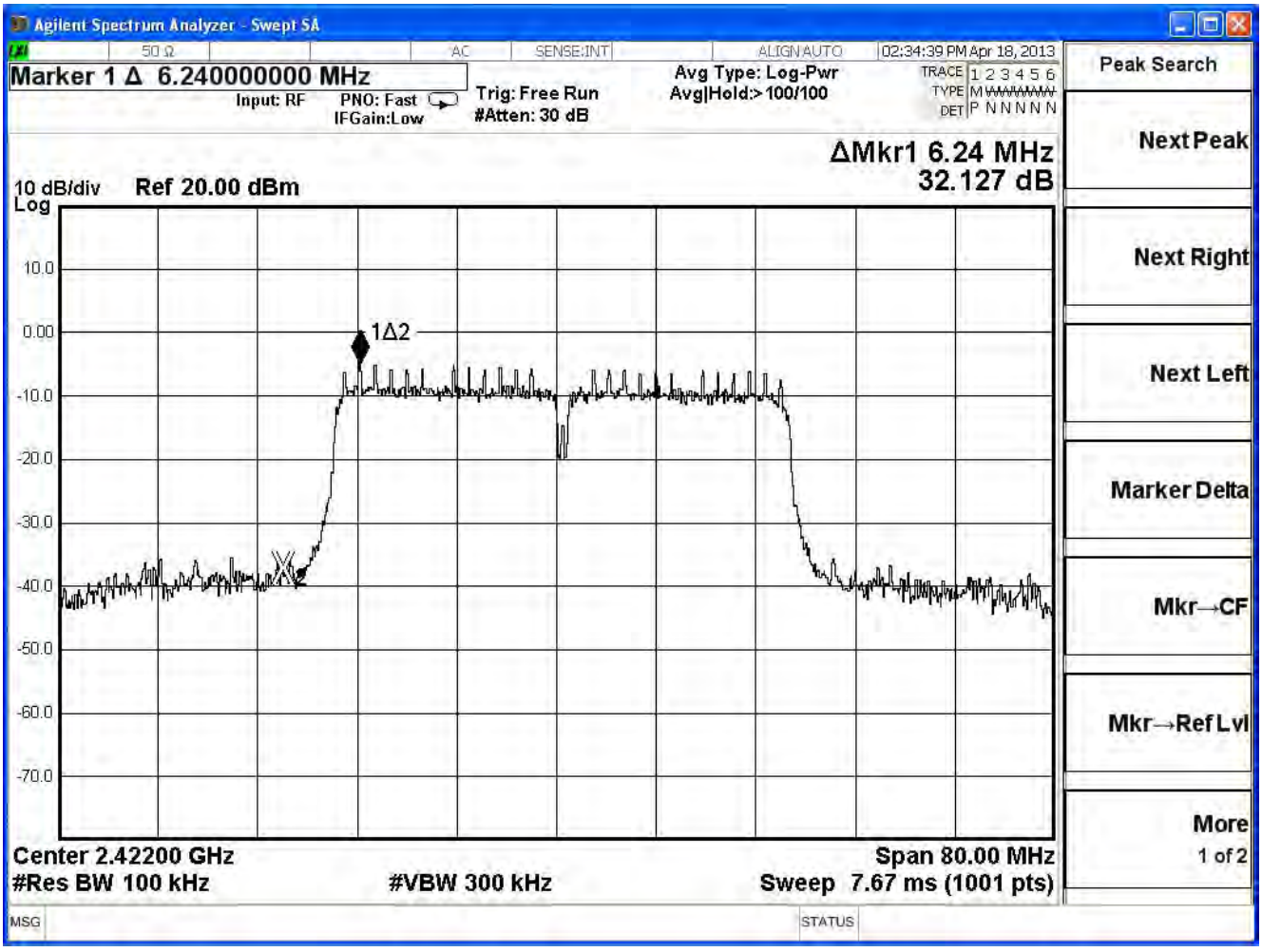
Channel 11 (2462MHz)



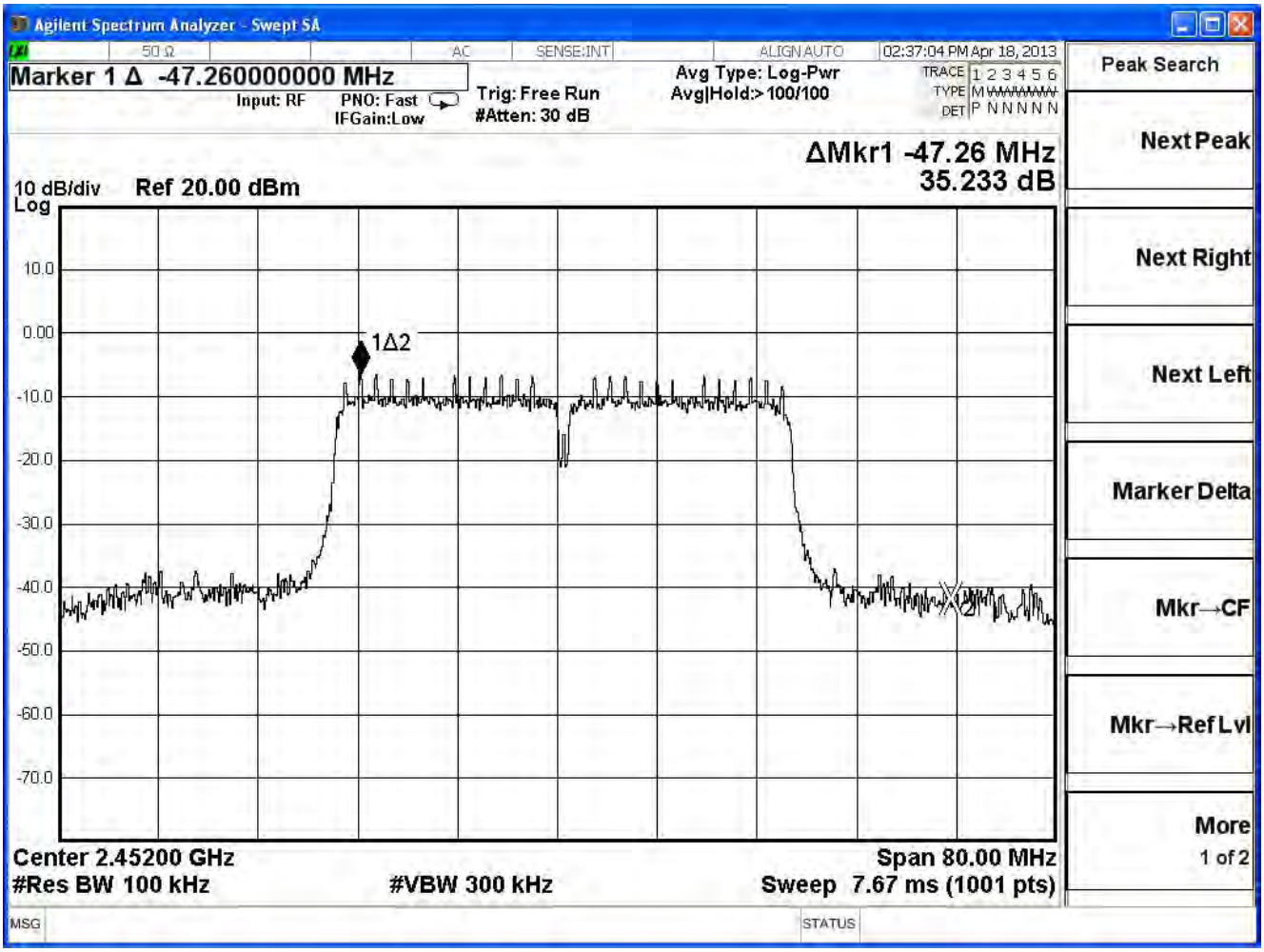
Product	VDSL2 Security Firewall		
Test Item	RF antenna conducted test		
Test Mode	Transmit		
Date of Test	2013/06/18	Test Site	SR7

IEEE 802.11n (40MHz), (ANT 0) , Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
3	2422	32.127	≧20	Pass
9	2452	35.233	≧20	Pass

Channel 3 (2422MHz)



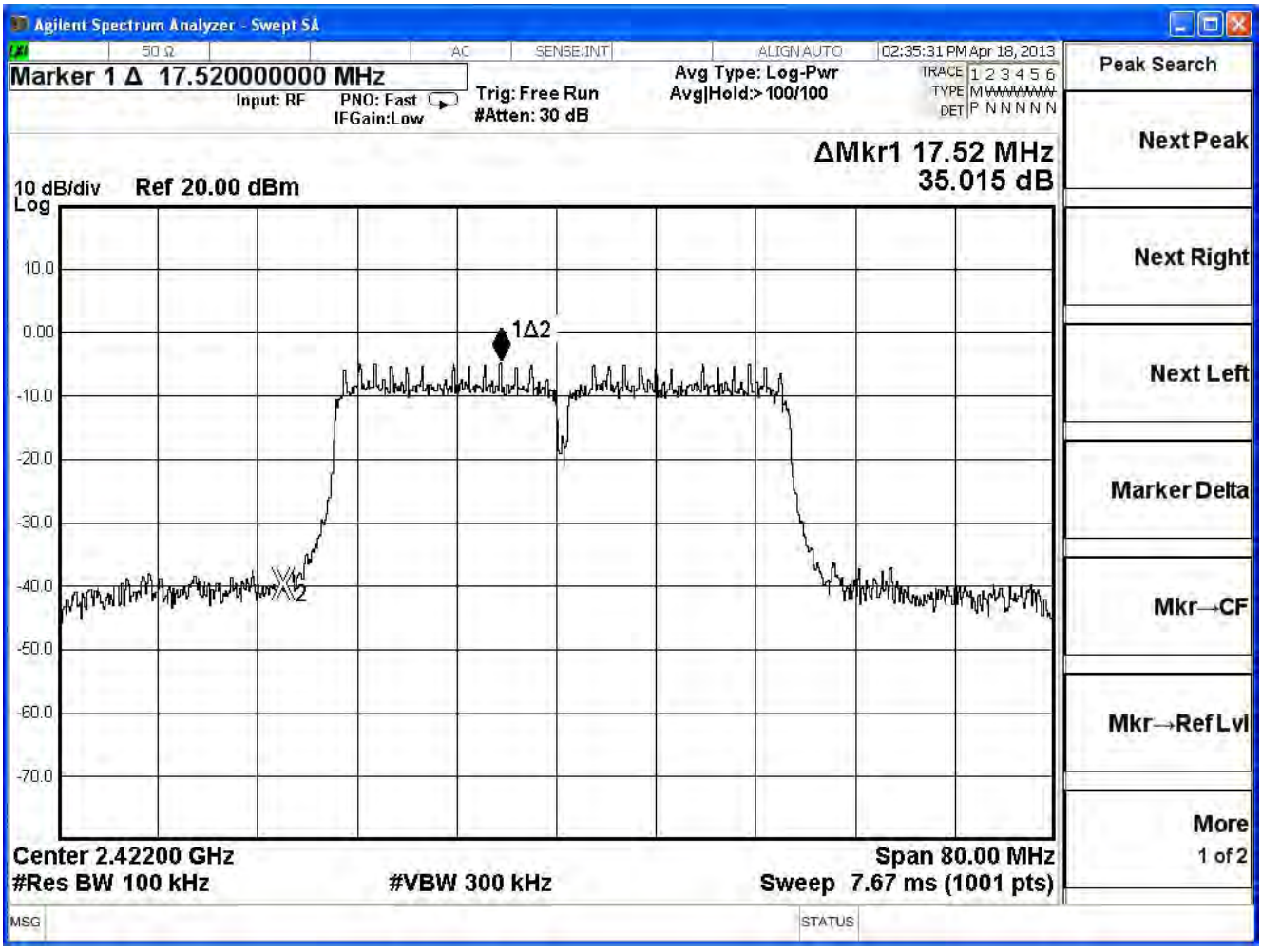
Channel 9 (2452MHz)



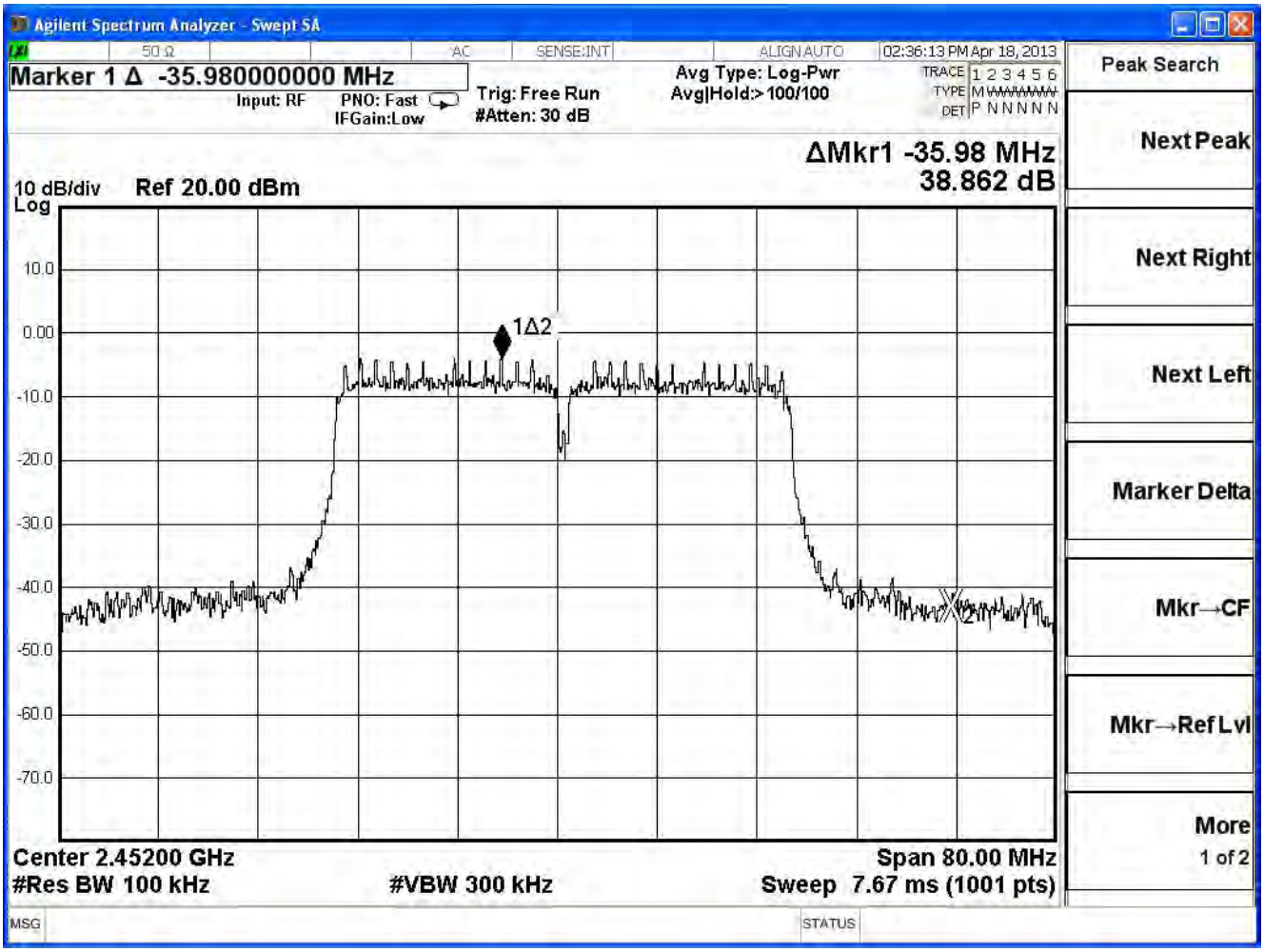
Product	VDSL2 Security Firewall		
Test Item	RF antenna conducted test		
Test Mode	Transmit		
Date of Test	2013/06/18	Test Site	SR7

IEEE 802.11n (40MHz), (ANT 1), Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
3	2422	35.015	≧20	Pass
9	2452	38.862	≧20	Pass

Channel 3 (2422MHz)

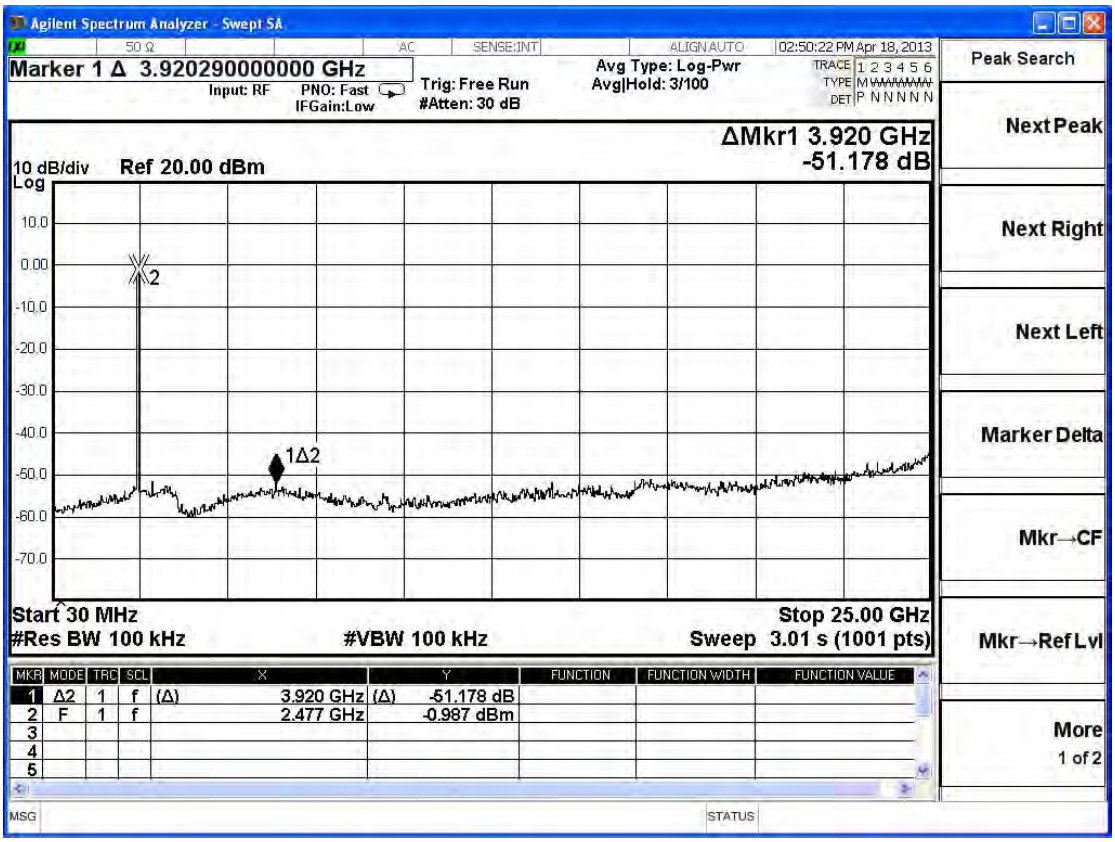


Channel 9 (2452MHz)



2412MHz (30MHz-25GHz)-802.11b

2462MHz (30MHz-25GHz) -802.11b



2412MHz (30MHz-25GHz)-802.11g

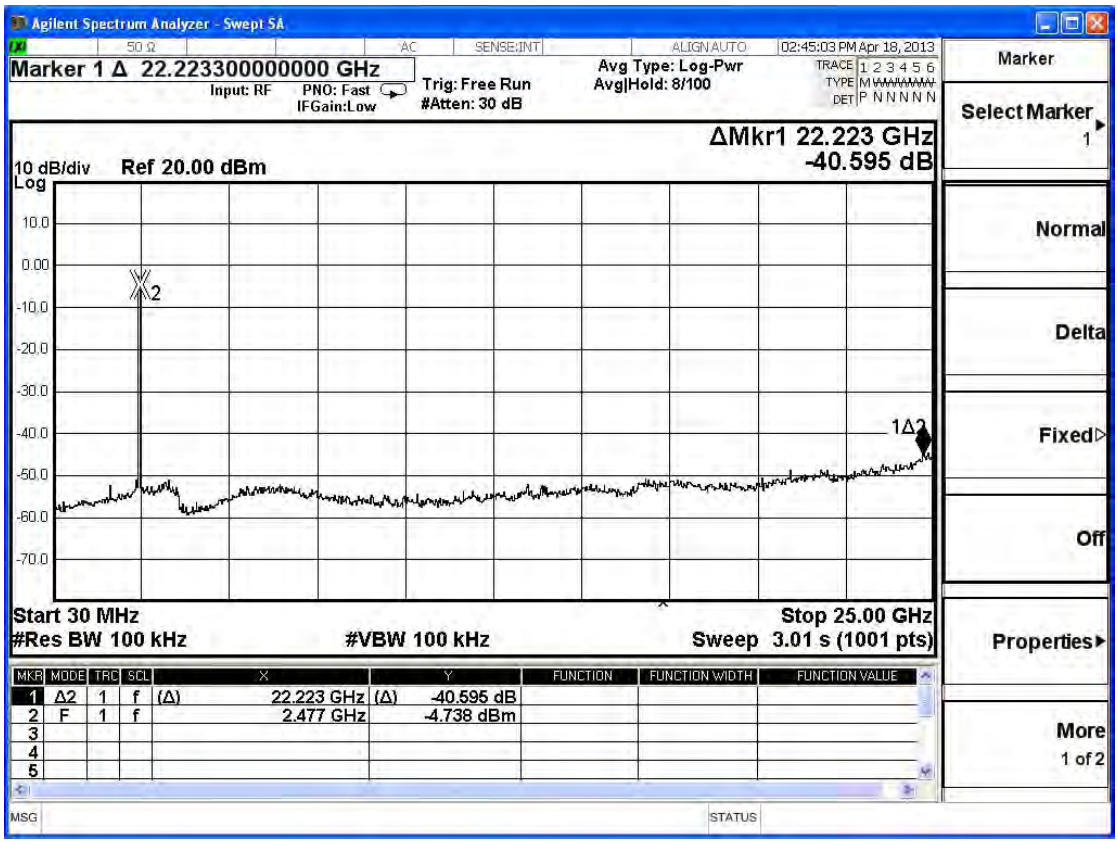
2462MHz (30MHz-25GHz) -802.11g

2412MHz (30MHz-25GHz)-802.11n(20MHz)-ANT 0

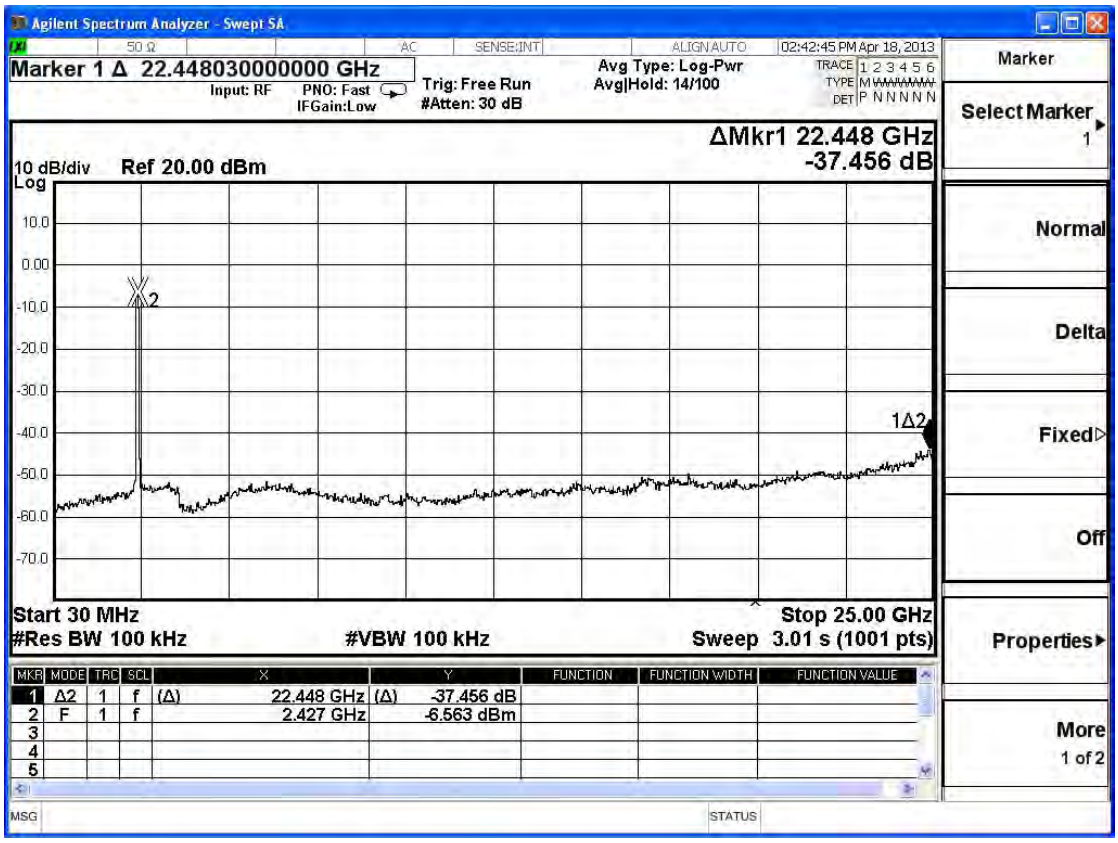
2462MHz (30MHz-25GHz) -802.11n(20MHz)-ANT 0

2412MHz (30MHz-25GHz)-802.11n(20MHz)-ANT 1

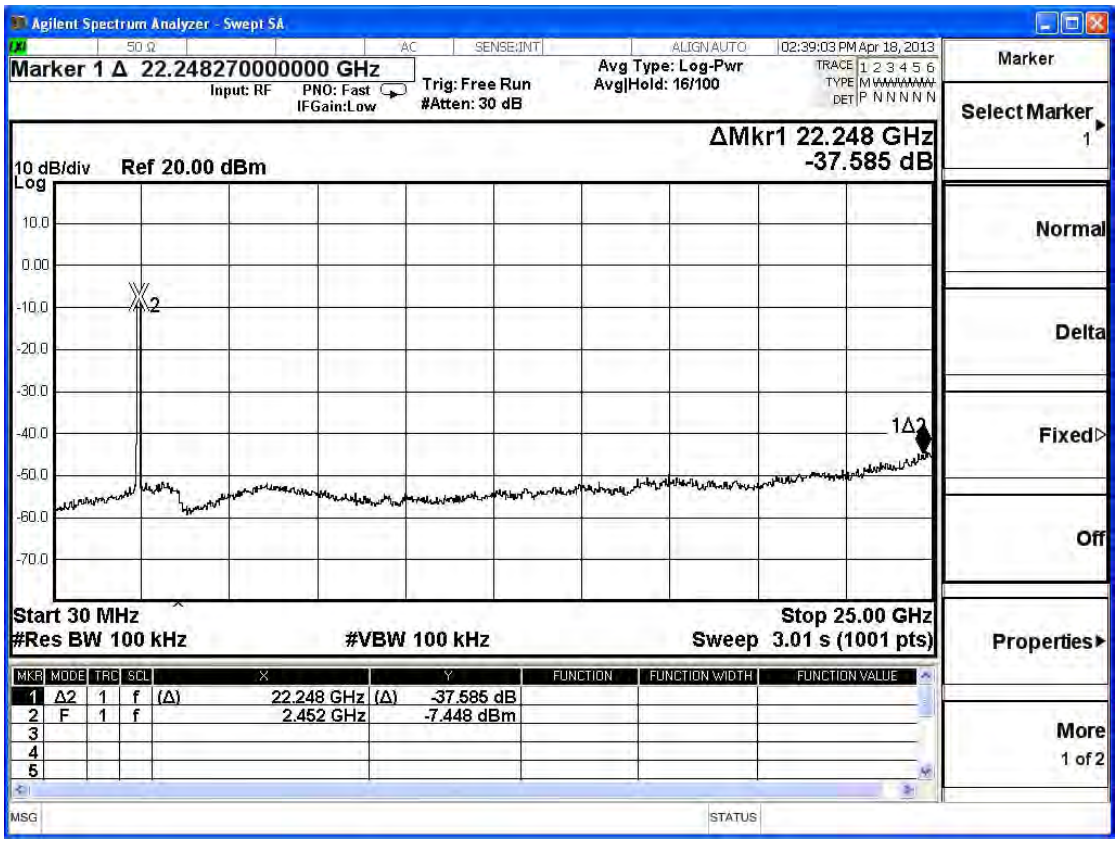
2462MHz (30MHz-25GHz) -802.11n(20MHz)-ANT 1



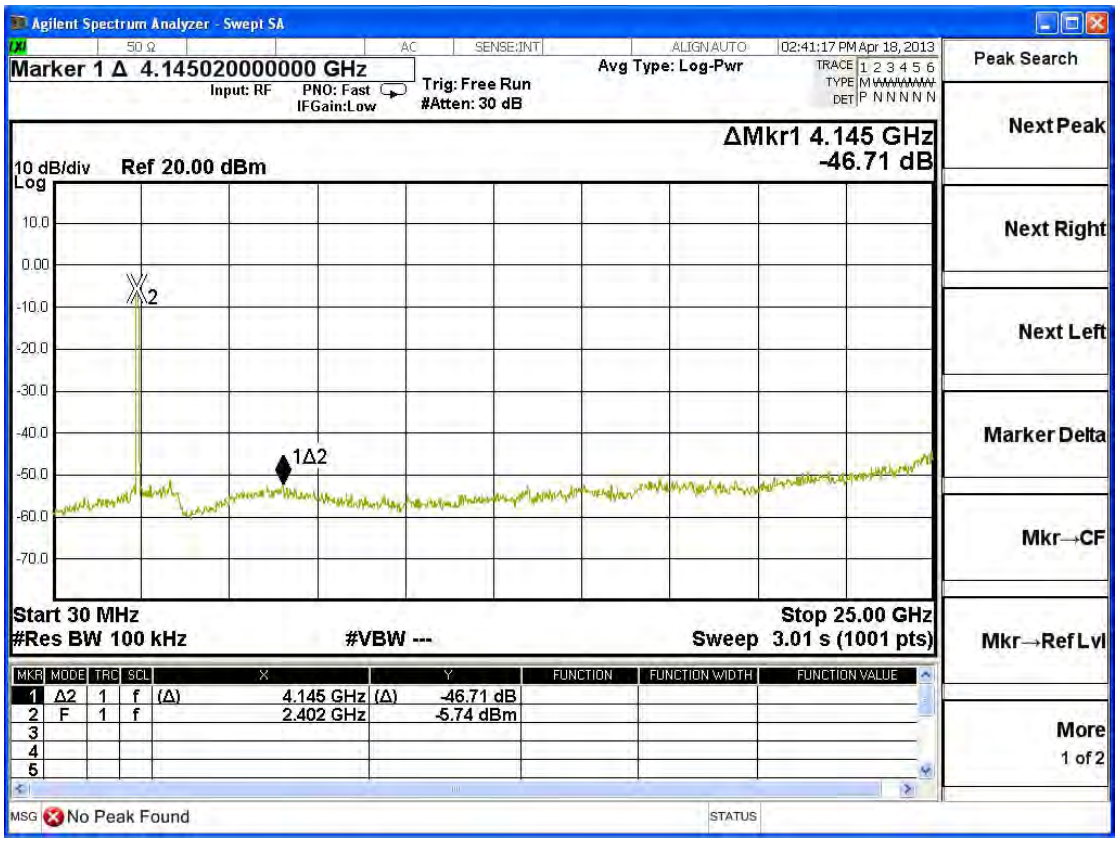
2422MHz (30MHz-25GHz)-802.11n(40MHz)-ANT 0



2452MHz (30MHz-25GHz) -802.11n(40MHz)-ANT 0



2422MHz (30MHz-25GHz)-802.11n(40MHz)-ANT 1

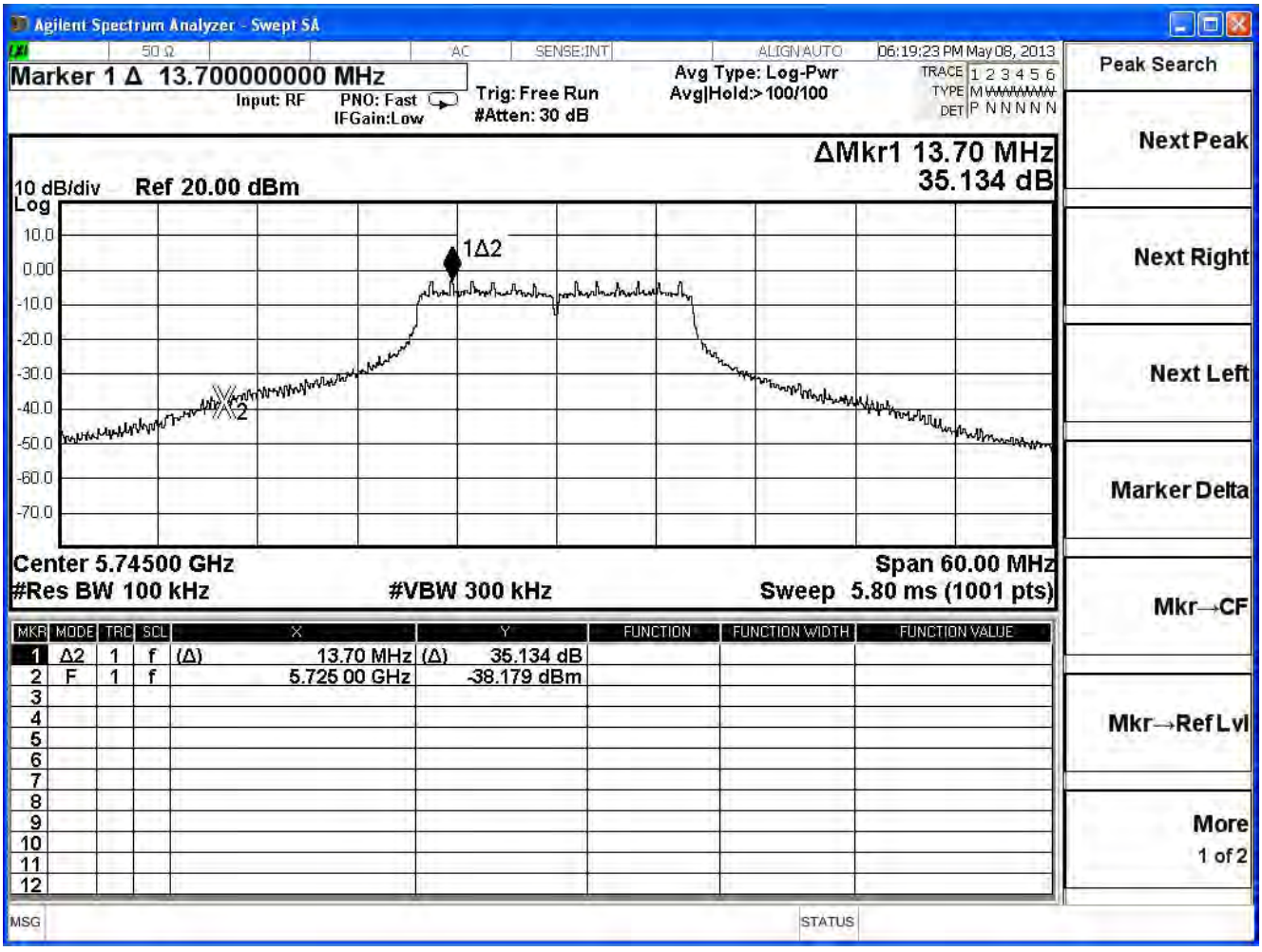


2452MHz (30MHz-25GHz) -802.11n(40MHz)-ANT 1

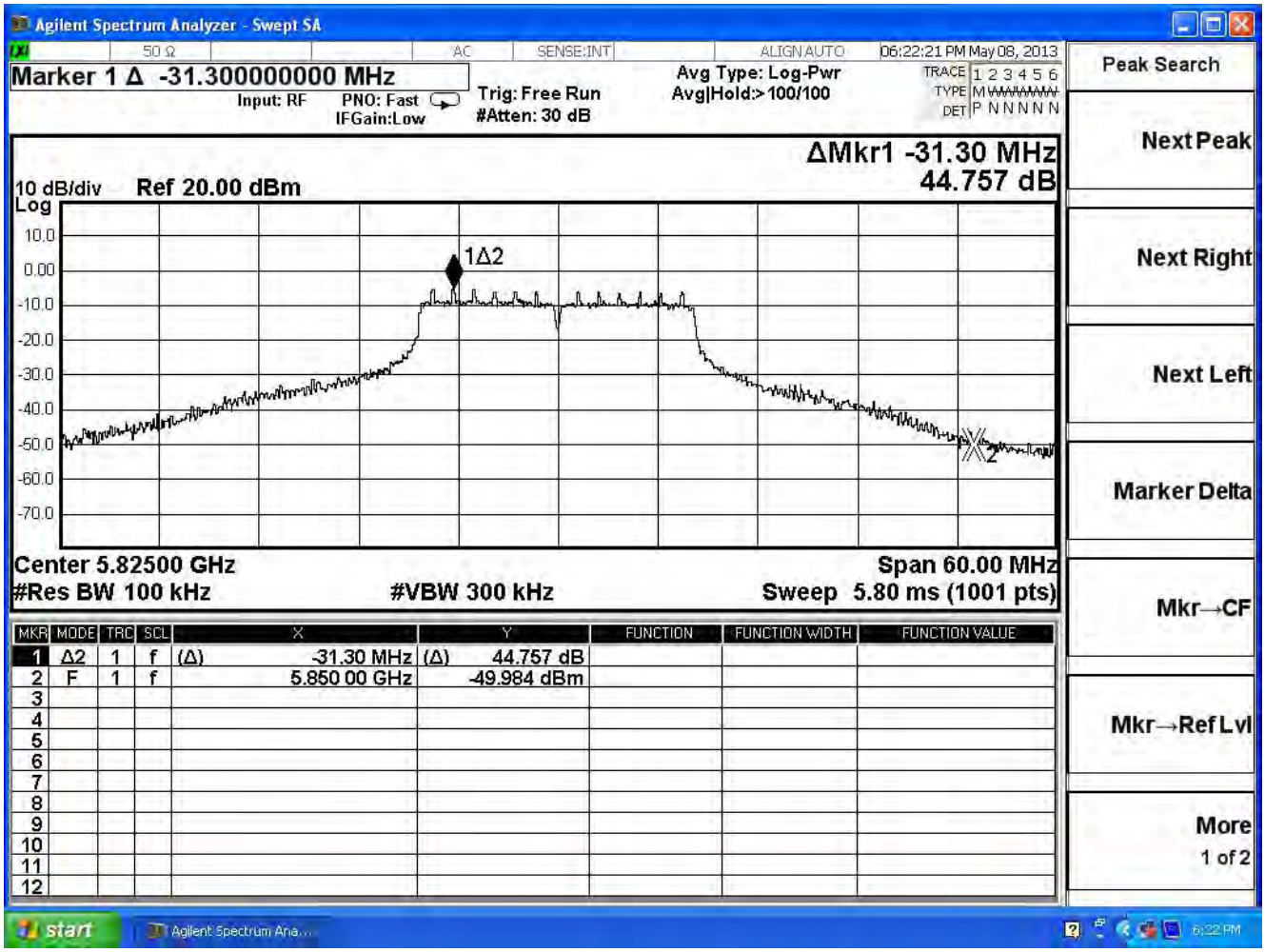
Product	VDSL2 Security Firewall		
Test Item	RF antenna conducted test		
Test Mode	Transmit		
Date of Test	2013/05/08	Test Site	SR7

IEEE 802.11a, Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
149	5745	35.134	≧20	Pass
165	5825	44.757	≧20	Pass

Channel 149 (5745MHz)



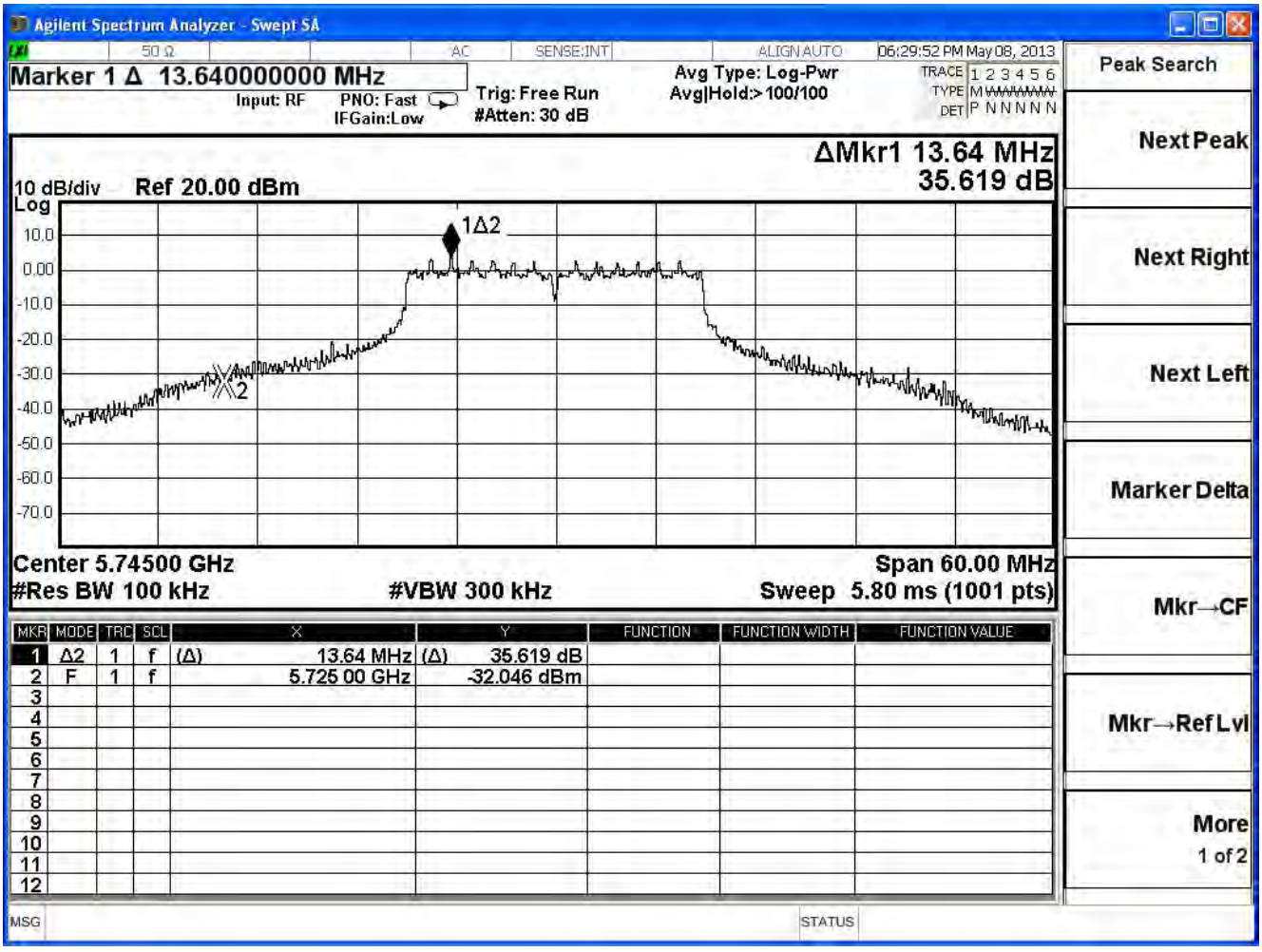
Channel 165 (5825MHz)



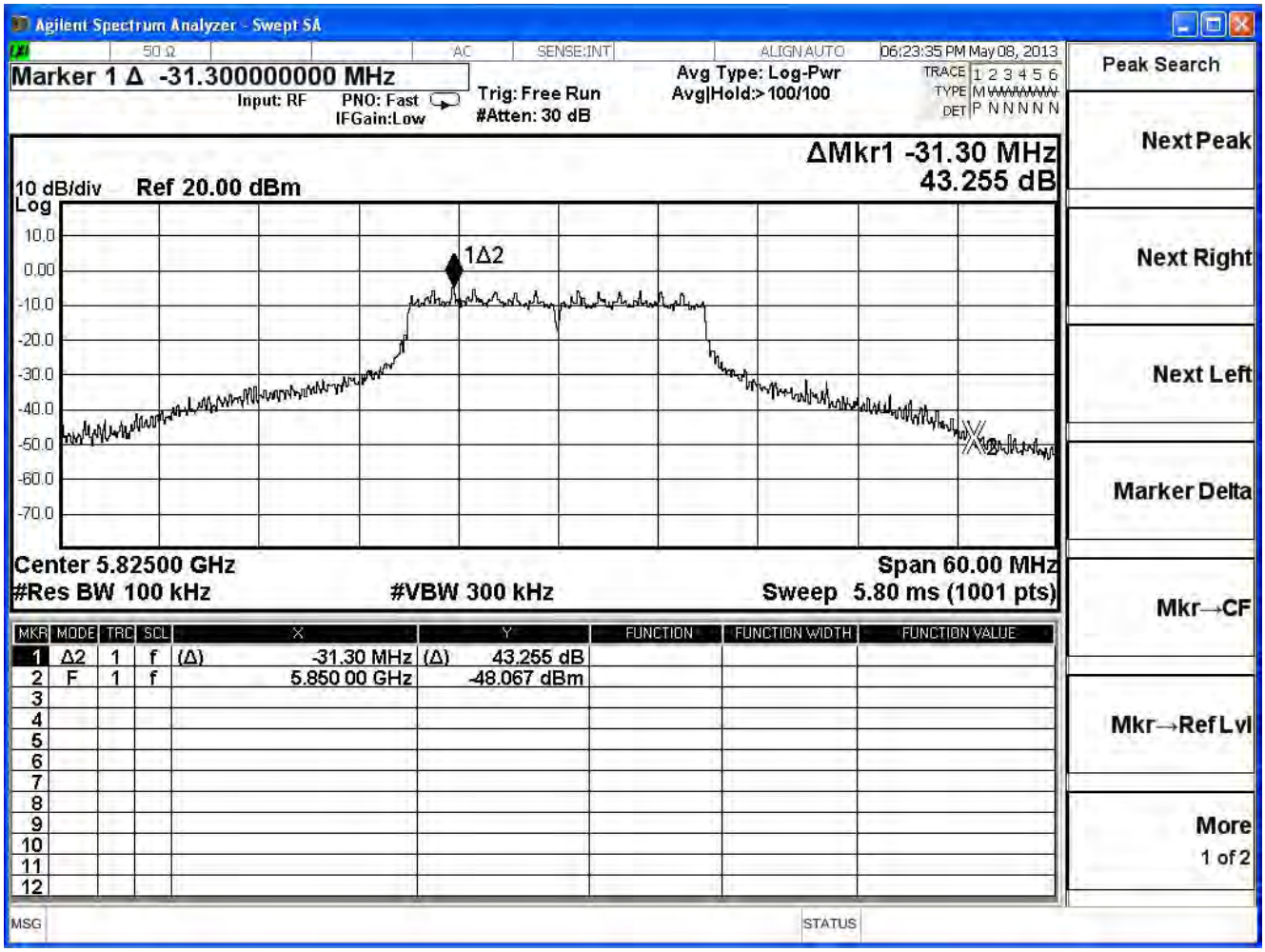
Product	VDSL2 Security Firewall		
Test Item	RF antenna conducted test		
Test Mode	Transmit		
Date of Test	2013/05/08	Test Site	SR7

IEEE 802.11n (20MHz), (ANT 0) Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
149	5745	35.619	≧20	Pass
165	5825	43.255	≧20	Pass

Channel 149 (5745MHz)



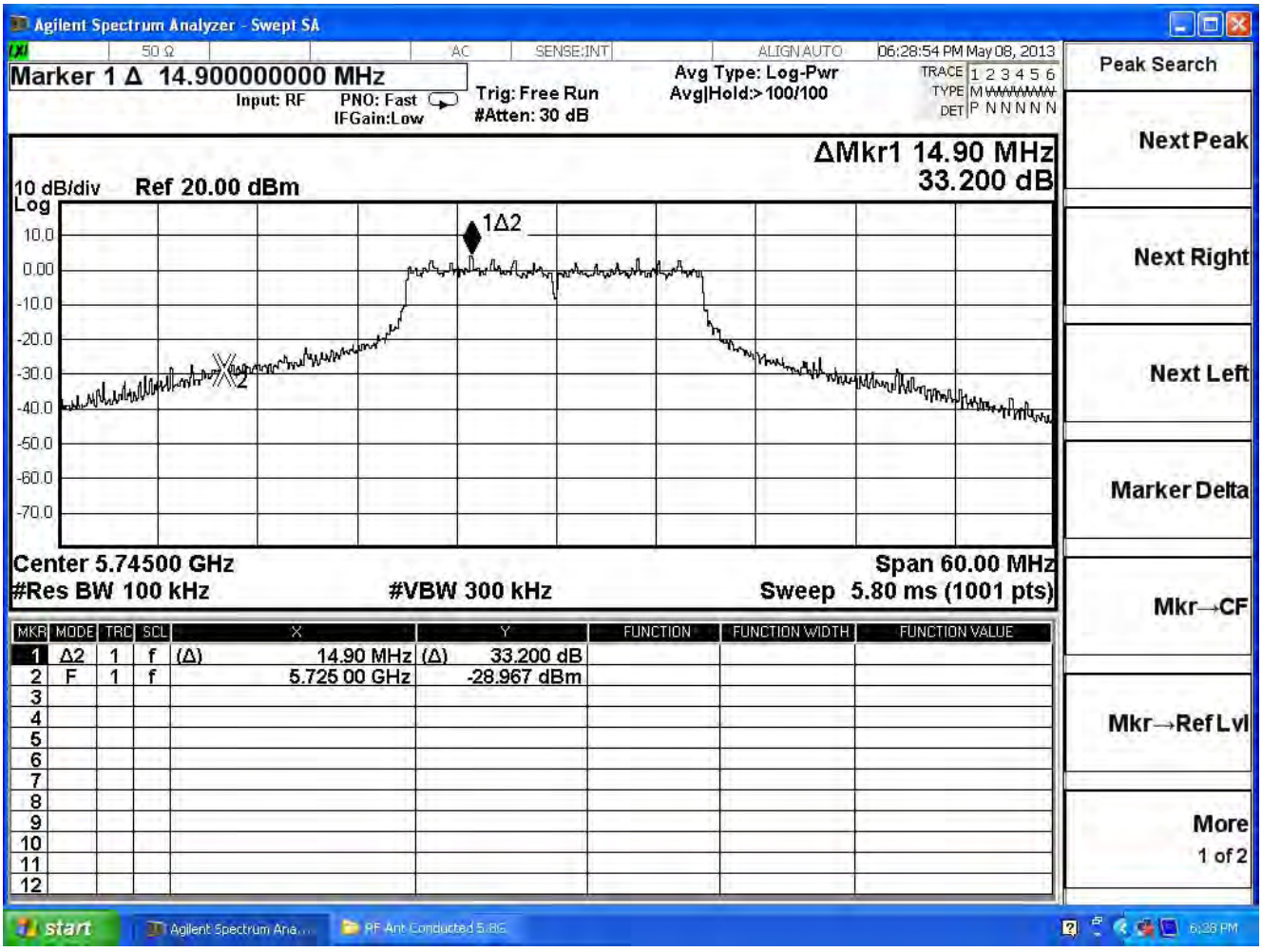
Channel 165 (5825MHz)



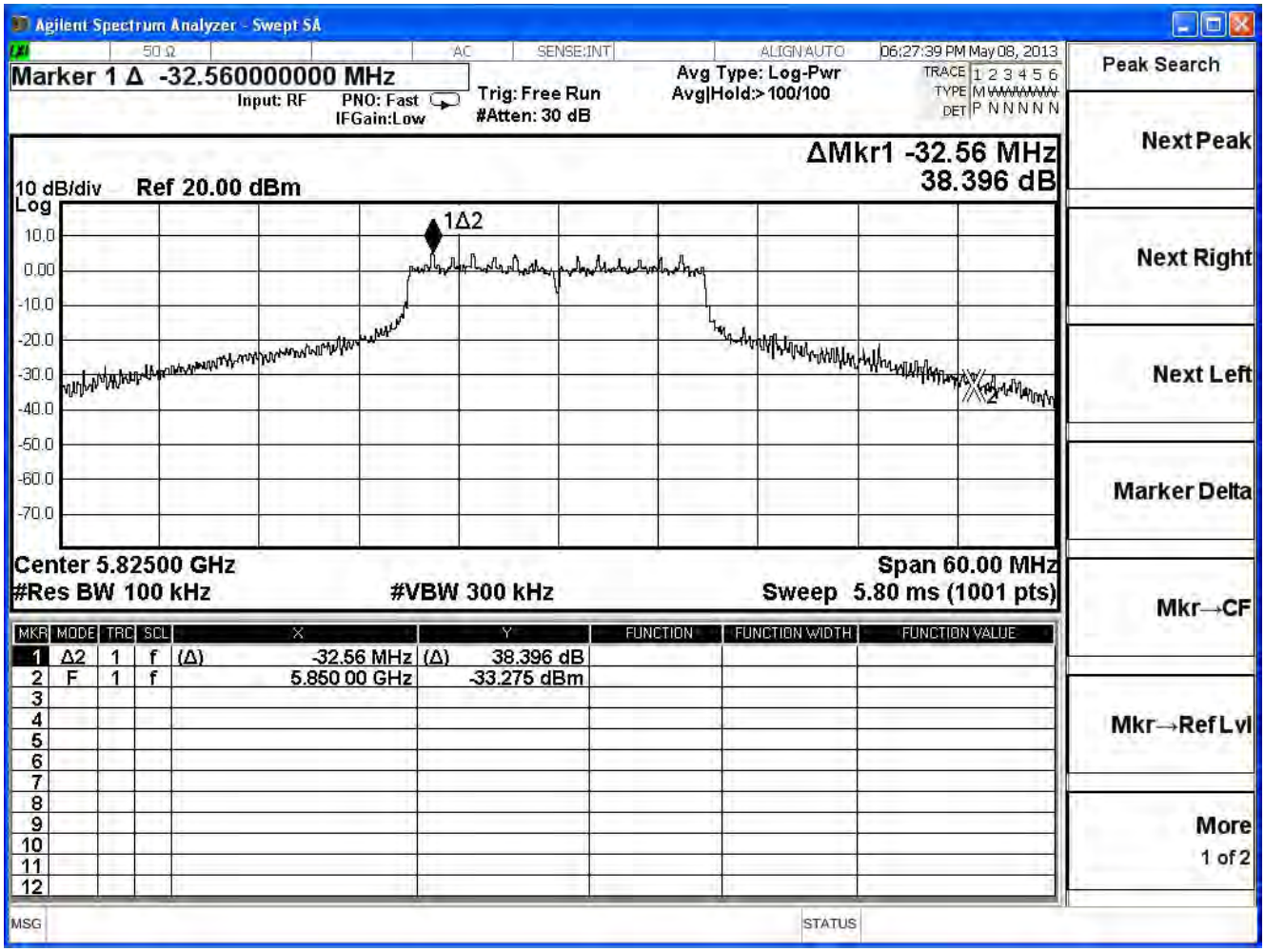
Product	VDSL2 Security Firewall		
Test Item	RF antenna conducted test		
Test Mode	Transmit		
Date of Test	2013/05/08	Test Site	SR7

IEEE 802.11n (20MHz), (ANT 1) Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
149	5745	33.200	≧20	Pass
165	5825	38.396	≧20	Pass

Channel 149 (5745MHz)



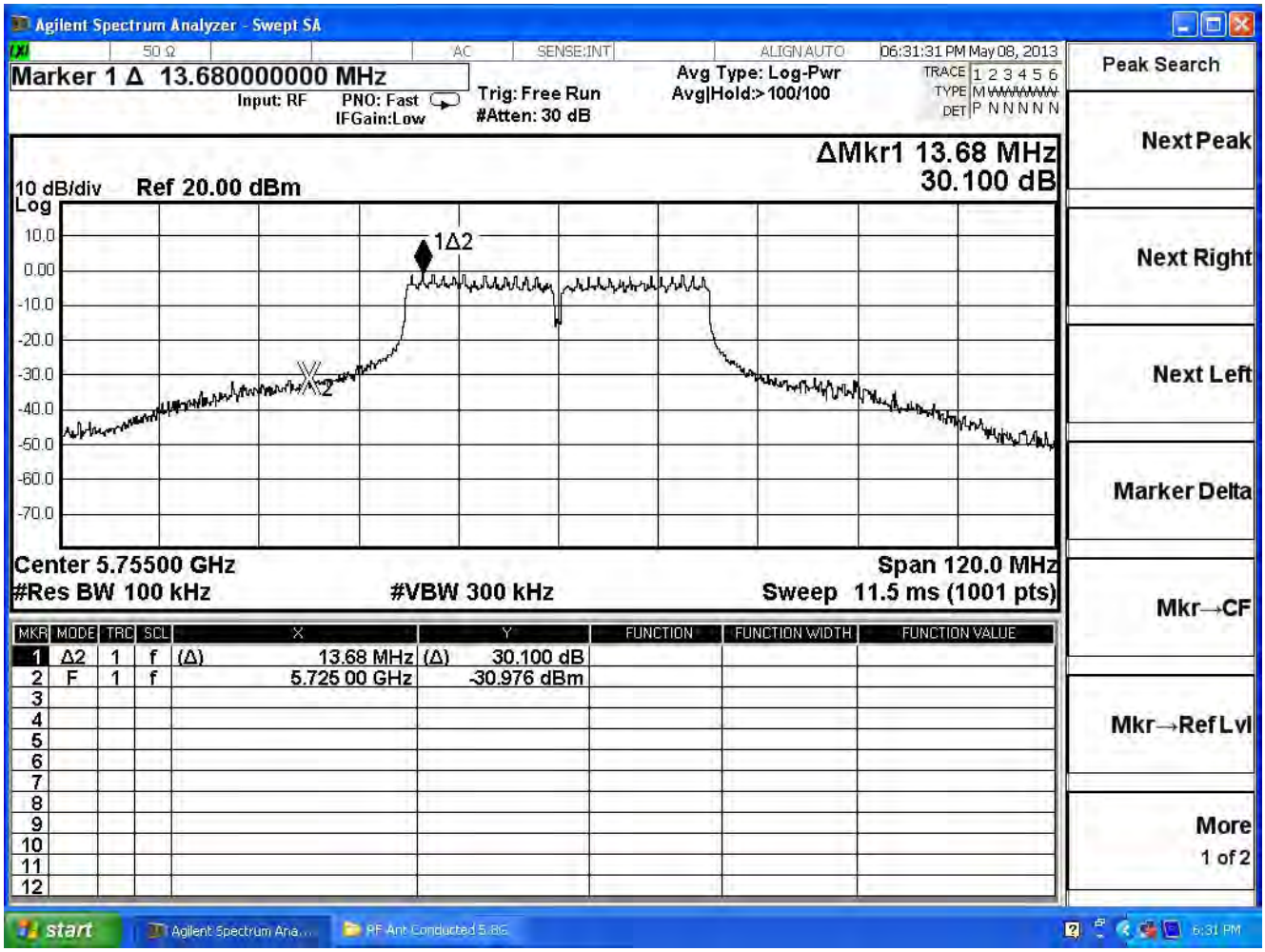
Channel 165 (5825MHz)



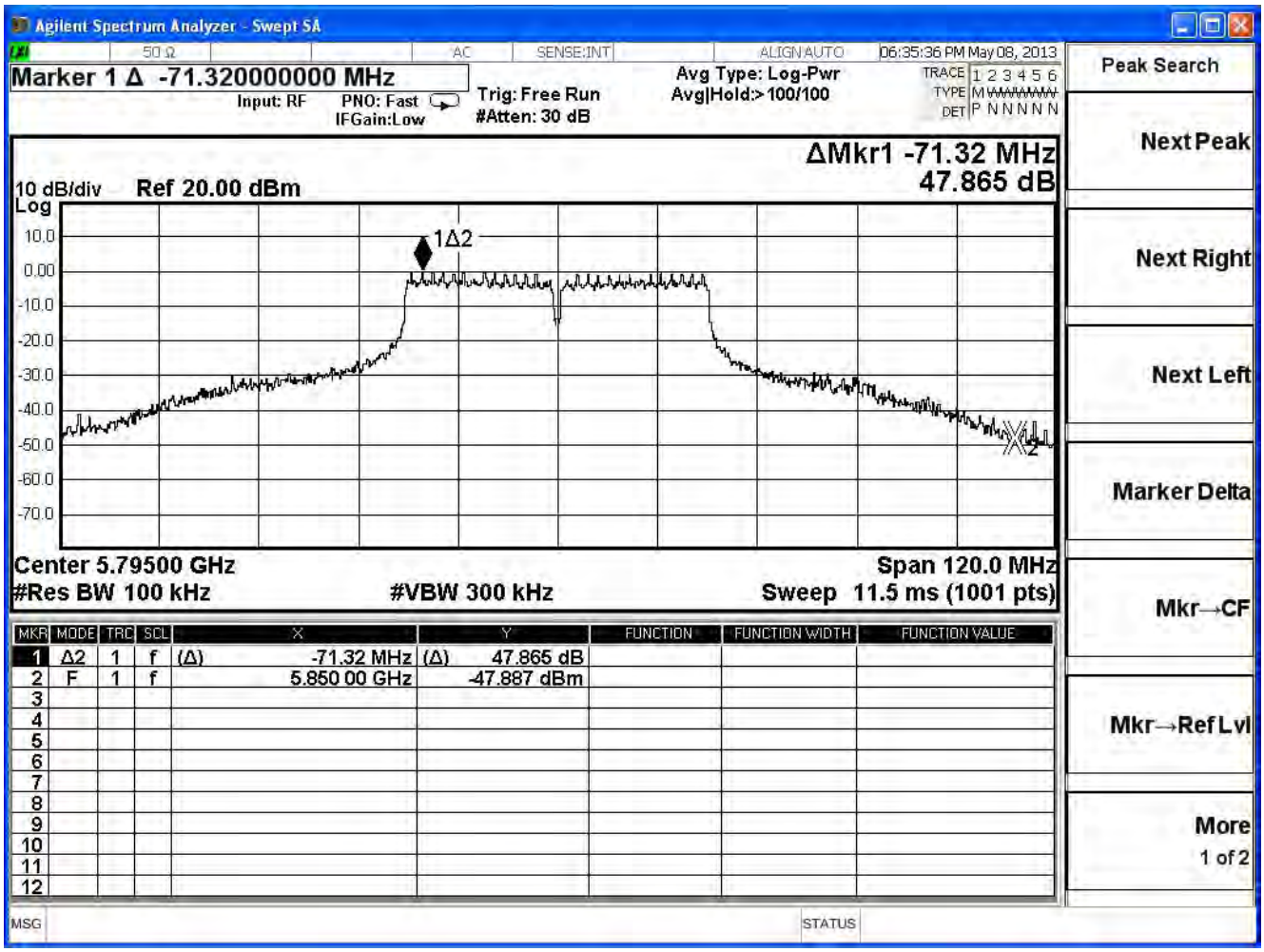
Product	VDSL2 Security Firewall		
Test Item	RF antenna conducted test		
Test Mode	Transmit		
Date of Test	2013/05/08	Test Site	SR7

IEEE 802.11n (40MHz), (ANT 0) Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
151	5755	30.100	≧20	Pass
159	5795	47.865	≧20	Pass

Channel 151 (5755MHz)



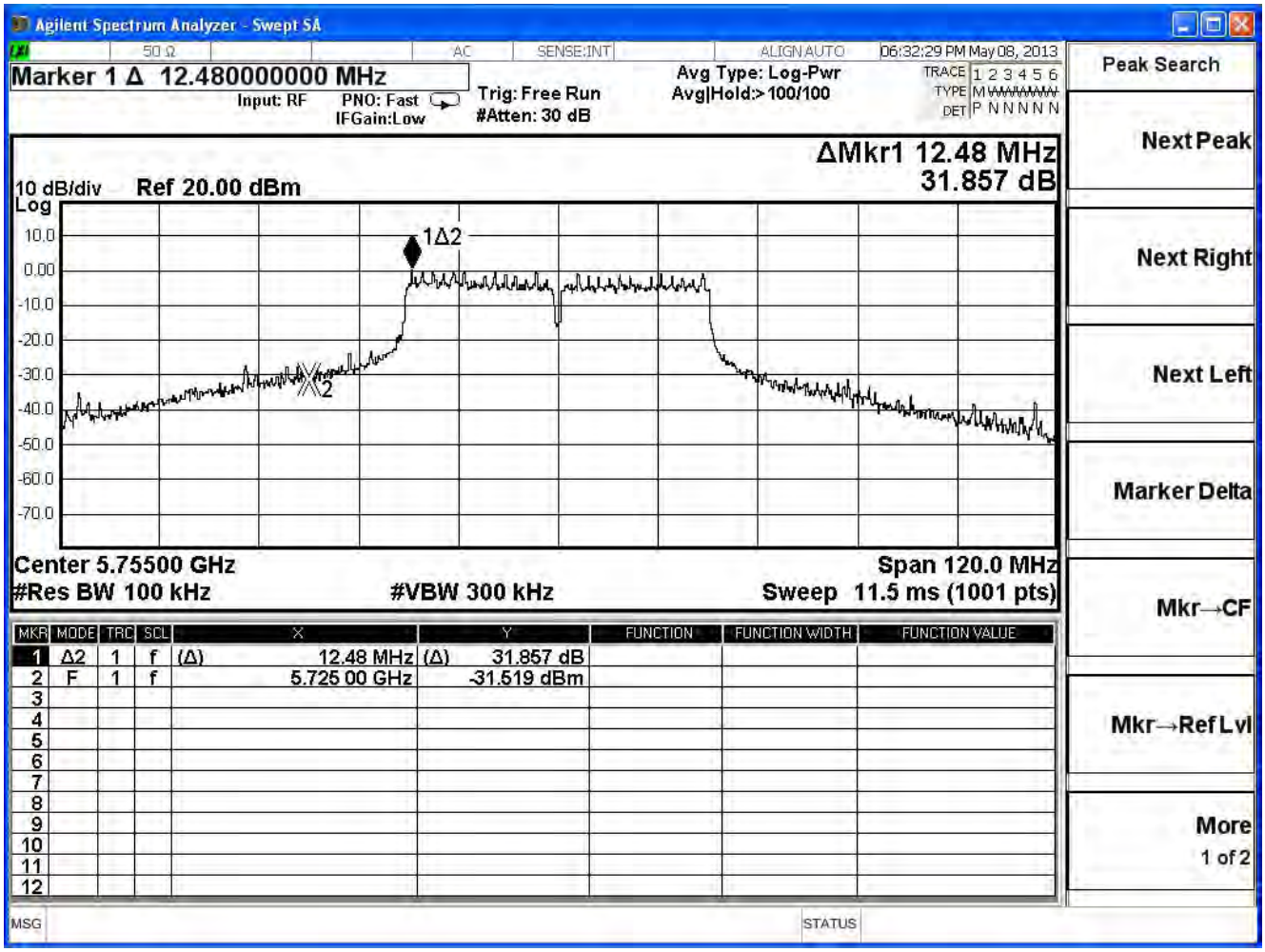
Channel 159 (5795MHz)



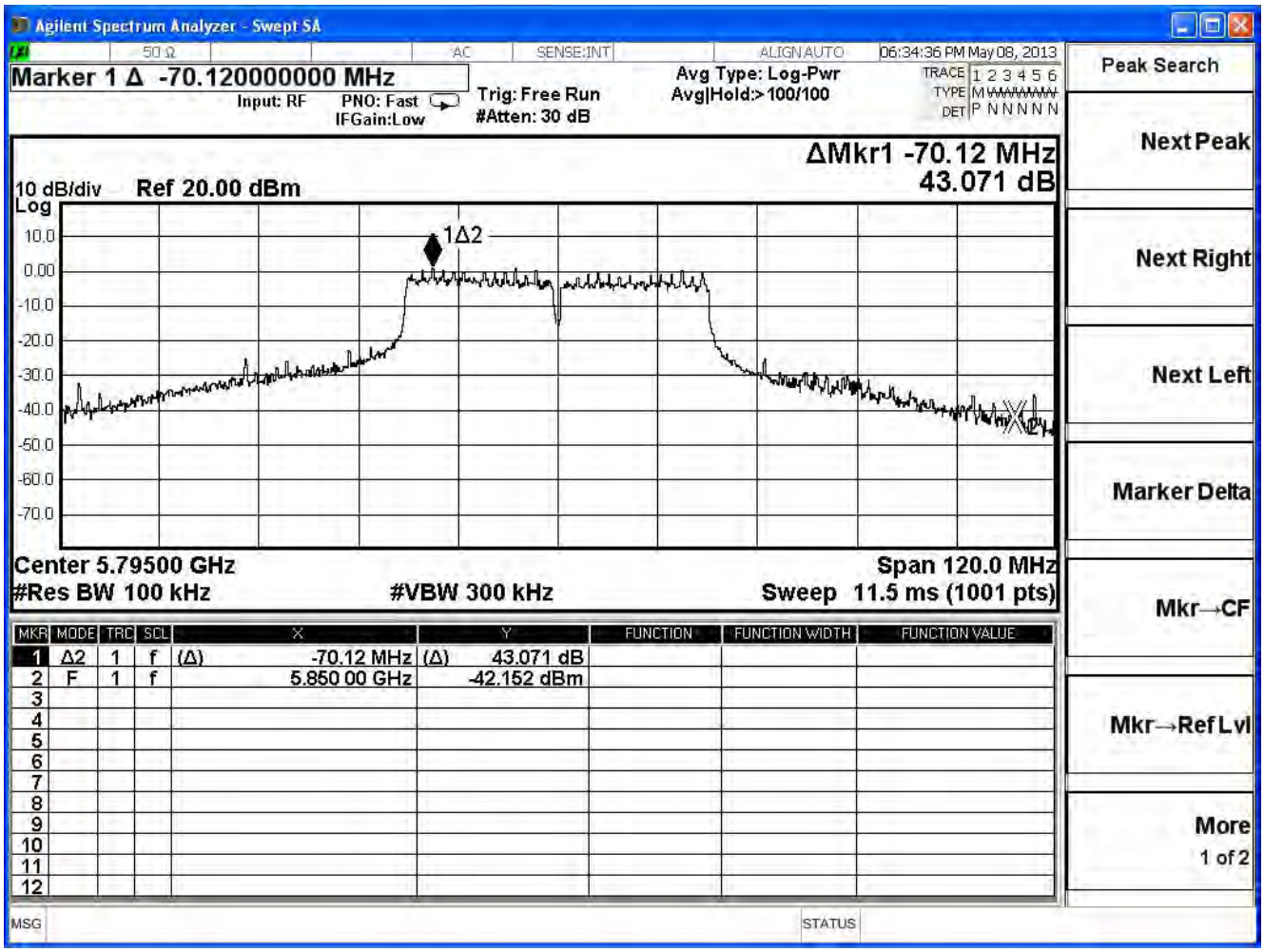
Product	VDSL2 Security Firewall		
Test Item	RF antenna conducted test		
Test Mode	Transmit		
Date of Test	2013/05/08	Test Site	SR7

IEEE 802.11n (40MHz), (ANT 1) Duty Cycle: 1				
Channel No.	Frequency (MHz)	Measure Level (dBc)	Limit (dBc)	Result
151	5755	31.857	≧20	Pass
159	5795	43.071	≧20	Pass

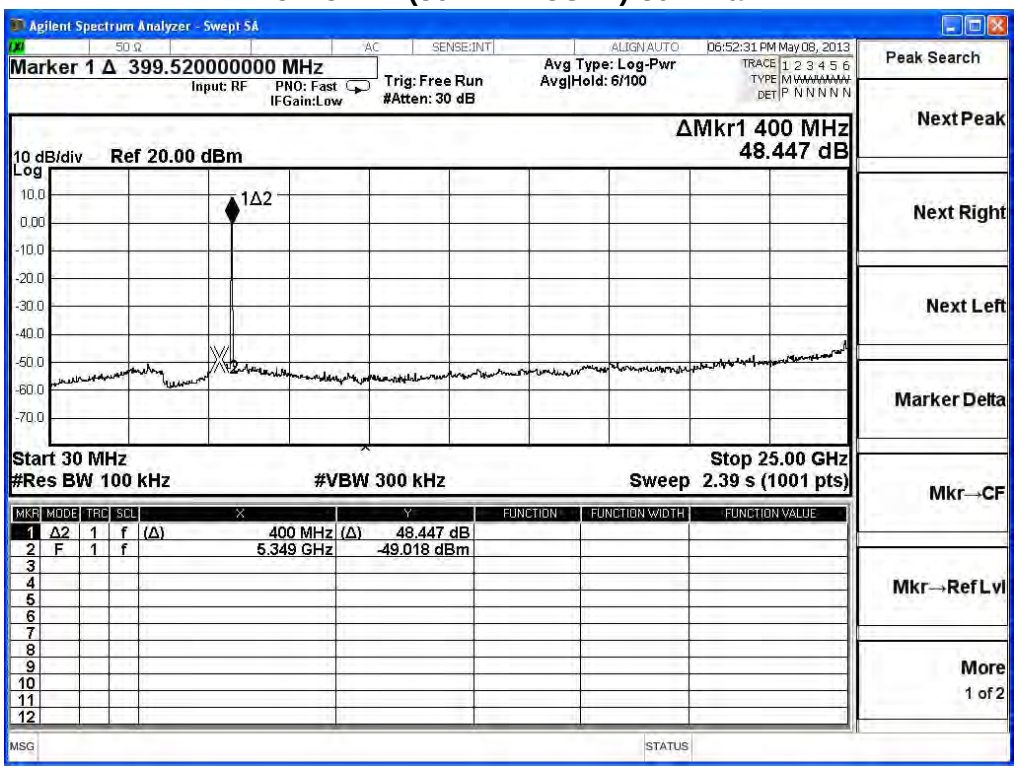
Channel 151 (5755MHz)



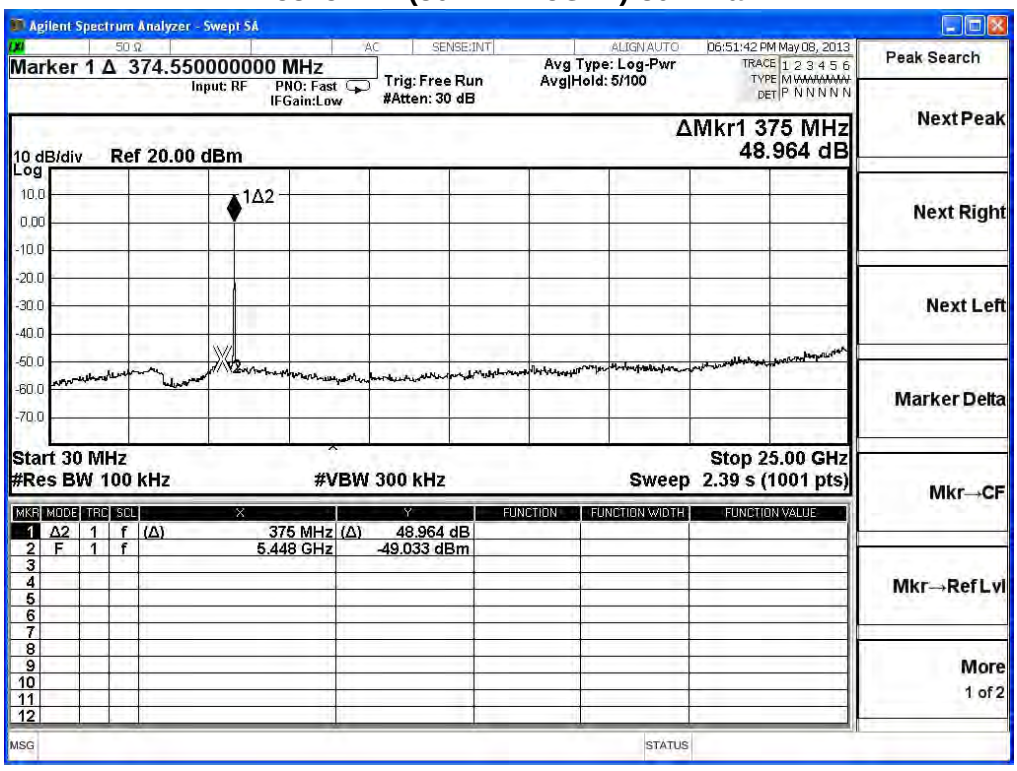
Channel 159 (5795MHz)



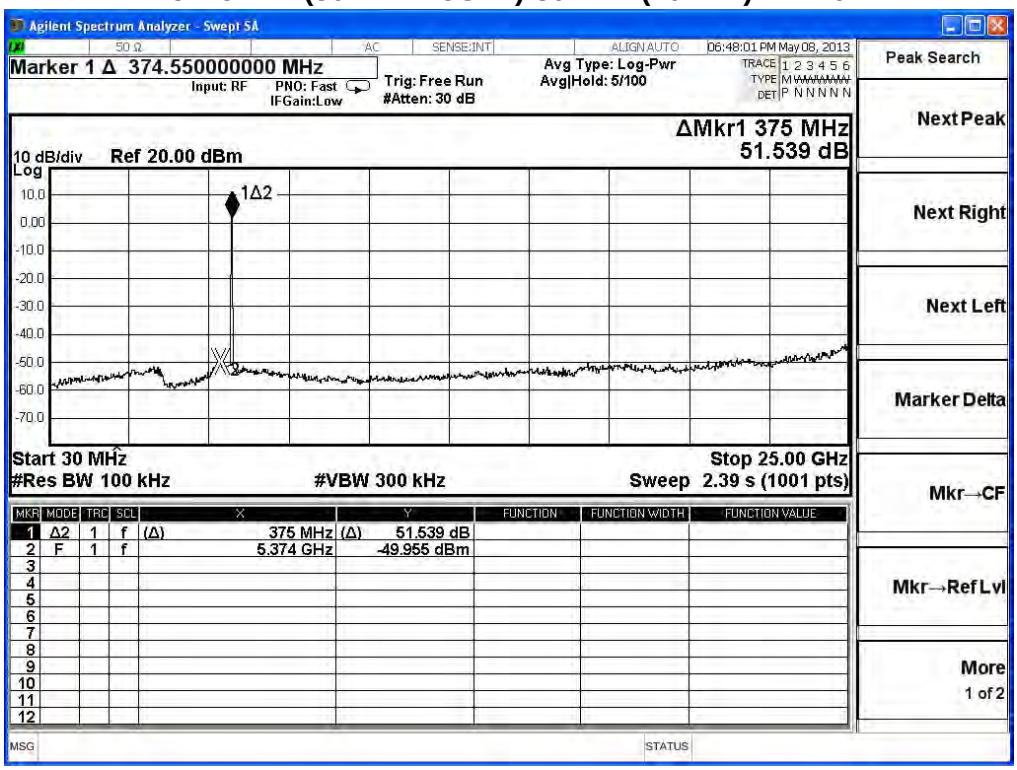
5745MHz (30MHz~25GHz)-802.11a



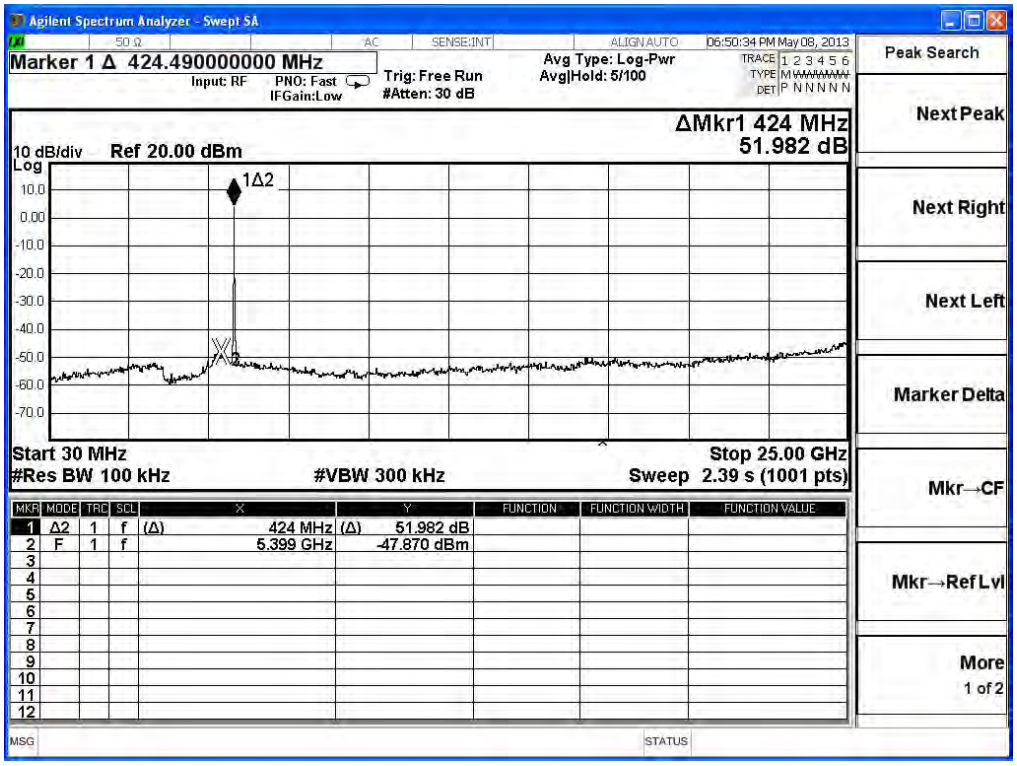
5825MHz (30MHz~25GHz)-802.11a



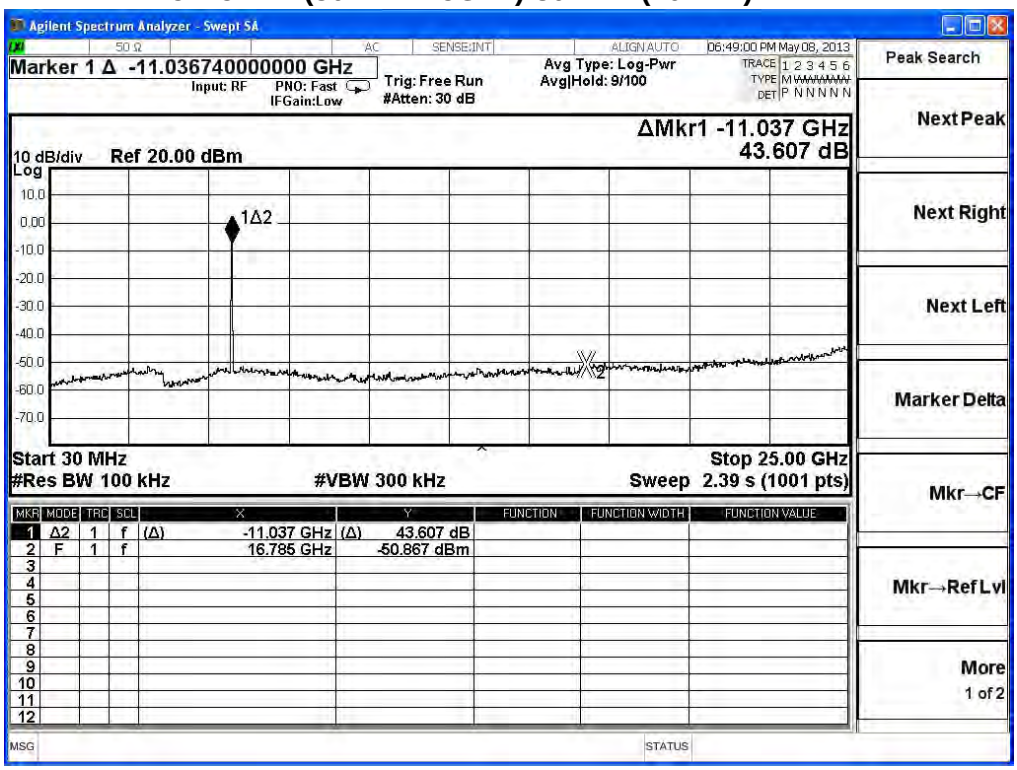
5745MHz (30MHz~25GHz)-802.11n(20MHz)-ANT 0



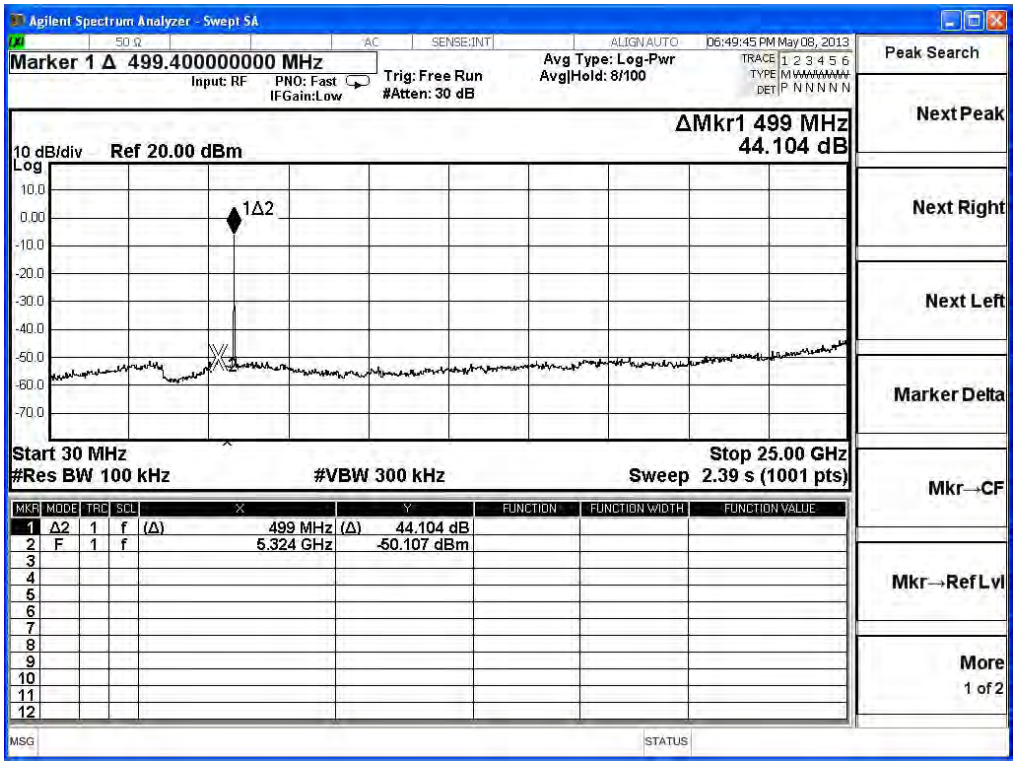
5825MHz (30MHz~25GHz) -802.11n(20MHz)-ANT 0



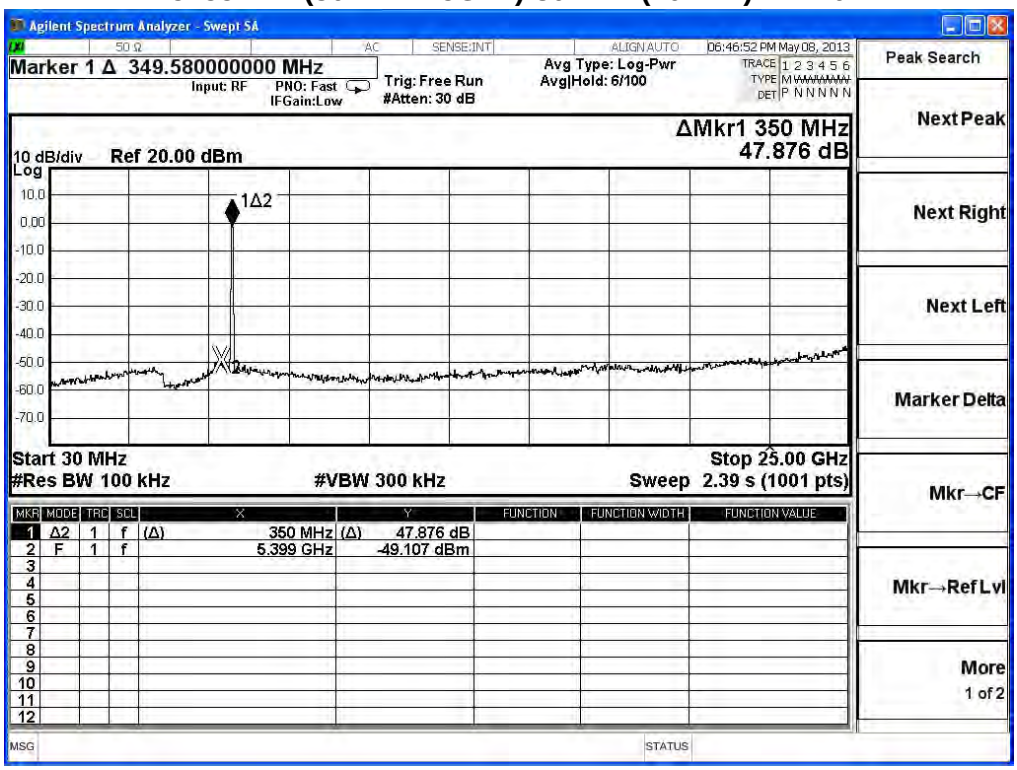
5745MHz (30MHz~25GHz)-802.11n(20MHz)-ANT 1



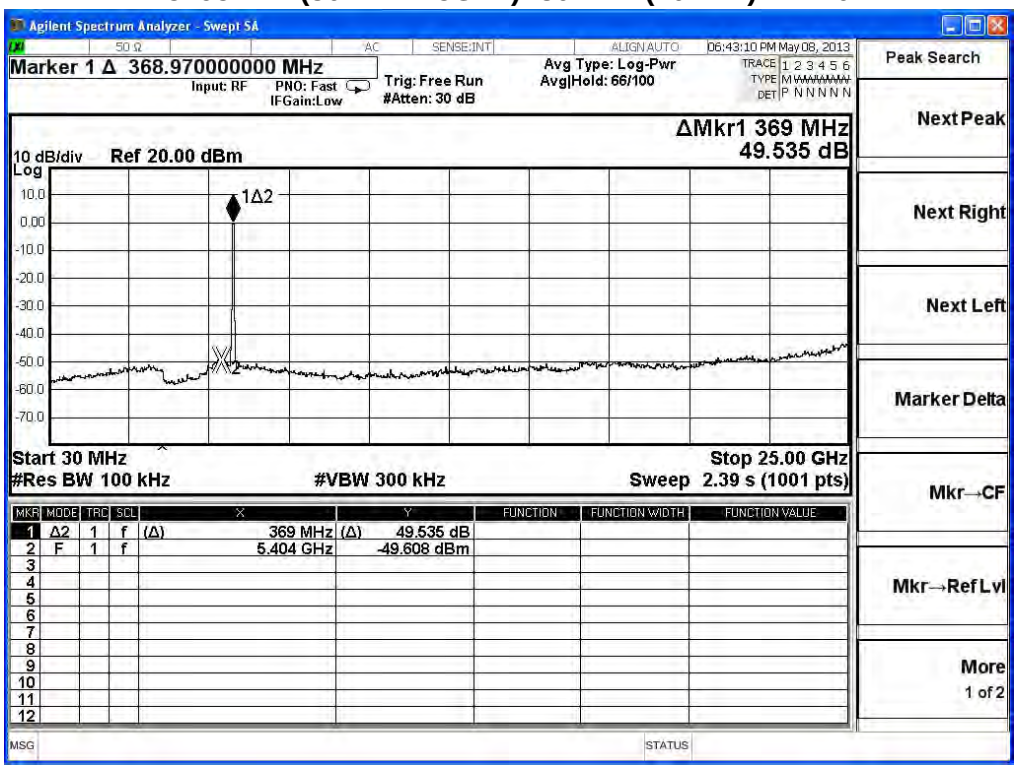
5825MHz (30MHz~25GHz) -802.11n(20MHz)-ANT 1



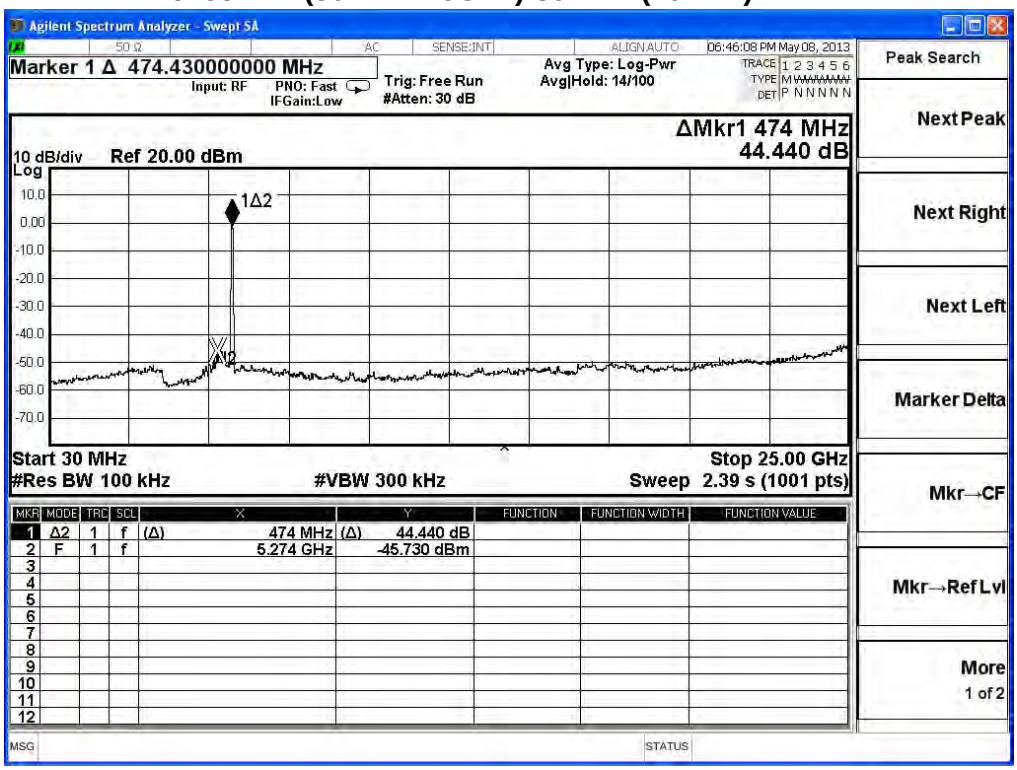
5755MHz (30MHz~25GHz)-802.11n(40MHz)-ANT 0



5795MHz (30MHz~25GHz) -802.11n(40MHz)-ANT 0



5755MHz (30MHz~25GHz)-802.11n(40MHz)-ANT 1



5795MHz (30MHz~25GHz) -802.11n(40MHz)-ANT 1