FCC Radio Test Report

FCC ID: Q3N-9700

This report concerns (check one) : ☒ **Original Grant** ☐ **Class II Change**

Issued Date : Apr. 24, 2014
Project No. : 1404142
Equipment : Mobile Computer
Model Name : 9700

Applicant : CIPHERLAB CO., LTD.
Address : 12F, 333, Dunhua S. Rd., Sec. 2, Taipei, Taiwan

Tested by: Neutron Engineering Inc. EMC Laboratory
Date of Receipt: Apr. 09, 2014
Date of Test: Apr. 09, 2014 ~ Apr. 23, 2014

Testing Engineer : (Josh Lin)

Technical Manager : (Jeff Yang)

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Testing Laboratory 0659

Declaration

Neutron represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C**., or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

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Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Table of Contents

Table of Contents

Table of Contents

REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
NEI-FCCP-1-1404142	Original Issue.	Apr. 24, 2014

1 CERTIFICATION

Equipment	:	Mobile Computer
Brand Name	:	CIPHERLAB
Model Name	:	9700
Applicant	:	CIPHERLAB CO., LTD.
Date of Test	:	Apr. 09, 2014 ~ Apr. 23, 2014
Standard(s)	:	FCC Part 15, Subpart C(15.247): 2013 ANSI C63.4: 2009

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-1404142) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

Standard Clause	Test Item	Result
15.207	Conducted Emission	**PASS**
15.247 (c)	Antenna conducted Spurious Emission	**PASS**
15.247 (a)(2)	6dB Bandwidth	**PASS**
15.247 (b)	Maximum Peak Conducted Output Power	**PASS**
15.247 (c)	Radiated Spurious Emission	**PASS**
15.247 (d)(e)	Power Spectral Density	**PASS**
15.205	Restricted Bands	**PASS**
15.203	Antenna Requirement	**PASS**

NOTE:

(1) N/A: denotes test is not applicable in this test report.

(2) This test report only covers radio operating bands: 2400-2483.5 MHz (IEEE 802.11b/g/n) and 5725-5825 MHz (IEEE 802.11a/n).
The test for radio operating bands: 5150-5250 MHz, 5250-5350 MHz and 5470-5725 MHz (IEEE 802.11a/n) is covered in another test report: NEI-FCCP-2-1404142.

(3) The test follows FCC KDB Publication NO. 558074 D01 DTS Meas Guidance v03r01(Measurement Guidelines of DTS)

2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

Conducted emission Test:

C02: (VCCI RN: C-3477; FCC RN: 614388; FCC DN: TW1054)
1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

Radiated emission Test (Below 1 GHz):

CB08: (FCC RN: 614388; FCC DN: TW1054; IC Assigned Code: 4428C-1)
1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

Radiated emission Test (Above 1 GHz):

CB08: (VCCI RN: G-91; FCC RN: 614388; FCC DN: TW1054; IC Assigned Code: 4428C-1)
1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

2.2 MEASUREMENT UNCERTAINTY

The measurement uncertainty is not specified by FCC rules and for reference only.

The reported uncertainty of measurement **y ± U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95**%.

The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2.

A. Conducted emission test:

Test Site	Measurement Frequency Range	U，(dB)	NOTE
C02	150 kHz ~ 30 MHz	2.59	

B. Radiated emission test:

Test Site	Item	Measurement Frequency Range		Uncertainty	NOTE
CB08	Radiated emission at 3m	Horizontal Polarization	30 - 200MHz	3.35 dB	
			200 - 1000MHz	3.11 dB	
			1 - 18GHz	3.97 dB	
			18 - 40GHz	4.01 dB	
		Vertical Polarization	30 - 200MHz	3.22 dB	
			200 - 1000MHz	3.24 dB	
			1 - 18GHz	4.05 dB	
			18 - 40GHz	4.04 dB	

Our calculated Measurement Instrumentation Uncertainty is shown in the tables above. These are our U_{lab} values in CISPR 16-4-2 terminology.

Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called U_{CISPR}, as follows:

Conducted Disturbance (mains port) – 150 kHz – 30 MHz: 3.6 dB
Radiated Disturbance (electric field strength on an open area test site or alternative test site) – 30 MHz – 1000 MHz: 5.2 dB

It can be seen that our U_{lab} values are smaller than U_{CISPR}.

If U_{lab} is less than or equal to U_{CISPR}, then:

- compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

If U_{lab} is greater than U_{CISPR}, then:

- compliance is deemed to occur if no measured disturbance level, increased by (U_{lab} - U_{CISPR}), exceeds the disturbance limit;
- non-compliance is deemed to occur if any measured disturbance level, increased by (U_{lab} - U_{CISPR}), exceeds the disturbance limit.

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Mobile Computer	
Brand Name	CIPHERLAB	
Model Name	9700	
OEM Brand/Model Name	N/A	
Model Difference	N/A	
Product Description	Operation Frequency	2412~2462 MHz, 5745~5825 MHz
	Modulation Type	DBPSK, DQPSK, CCK, BPSK, QPSK, 16QAM, 64QAM, MIMO **2412~2462 MHz:** IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: OFDM (1 TX & 1 RX) **5745~5825 MHz:** IEEE 802.11a: OFDM IEEE 802.11n: BPSK (1 TX & 1 RX)
	Bit Rate of Transmitter	IEEE 802.11b: 1, 2, 5.5, 11 Mbps IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps IEEE 802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps IEEE 802.11n: HT20: 6.5, 7.2, 13.0, 14.4, 19.5, 21.7, 26.0, 28.9, 39.0, 43.3, 52.0, 57.8, 58.5, 65.0, 72.2 Mbps
	Maximum Conducted Output Power	Peak Output Power: **2412~2462 MHz:** IEEE 802.11b: 14.94 dBm (0.0312 W) IEEE 802.11g: 20.83 dBm (0.1211 W) IEEE 802.11n (20 MHz): 20.26 dBm (0.0312 W) **5745~5825 MHz:** IEEE 802.11a: 16.61 dBm (0.0458 W) IEEE 802.11n (20 MHz): 16.54 dBm (0.0451 W)
Power Source	1. Battery supplied. 2. DC Voltage supplied from External Power Supply.	
Power Rating	1. Li-ion BATTERY PACK: 3.7V 2. External Power Supply: I/P: AC 100-240V 47-63Hz 0.58A MAX / O/P: DC 5V 4A 20W MAX	
Connecting I/O Port(s)	Please refer to the User's Manual	
Products Covered	1 * Keypad (optional): 53 Keys, 38 Keys or 30 Keys 1 * Li-ion BATTERY PACK (optional): (1) CIPHERLAB, BA-0083A6, 3.7V 3600mAh, 13.32Wh (2) CIPHERLAB, BA-0085A4, 3.7V 5400mAh, 19.98Wh 1 * Reader (optional): SE-4500+PL4507, SE-4500, SE-955, EX25 or SE-1524. 1 * Snap-On Cable (optional): (1) RS-232 Type (2) USB Type 1 * External Power Supply: ADAPTER TECH., STD-05040T 1 * Pistol (optional)	
EUT Modification(s)	N/A	

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
2. Channel List:

2412-2462 MHz Band (IEEE 802.11b/g/n (20MHz))					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	05	2432	09	2452
02	2417	06	2437	10	2457
03	2422	07	2442	11	2462
04	2427	08	2447		

5745-5825 MHz Band (IEEE 802.11a/n (20MHz))					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	157	5785	165	5825
153	5765	161	5805		

3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)		Note	
					2.4G	5G	2.4G	5G
1	CIPHERLAB	KX00000060113	Main Antenna	N/A	1.95	2.52	TX/RX	TX
2	CIPHERLAB	KX00000060122	Div Antenna	N/A	N/A	3.11	N/A	RX

4. The EUT provides 1 completed transmitter and 1 receiver (1T1R).

2412-2462 MHz Band	
Modulated type	TX Function
IEEE 802.11b	1 TX
IEEE 802.11g	1 TX
IEEE 802.11n (20MHz)	1 TX

5745-5825 MHz Band	
Modulated type	TX Function
IEEE 802.11a	1 TX
IEEE 802.11n (20MHz)	1 TX

3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

2412-2462 MHz Band					
Test Items	**IEEE**	**Mode**	**Data Rate**	**Channel**	**Note**
Conducted Emission	802.11b	DSSS	1 Mbps	06	
Antenna conducted Spurious Emission	802.11b	DSSS	1 Mbps	01/06/11	
	802.11g	OFDM	6 Mbps	01/06/11	
	802.11n (20 MHz)	BPSK	MCS0	01/06/11	
6 dB Bandwidth	802.11b	DSSS	1 Mbps	01/06/11	
	802.11g	OFDM	6 Mbps	01/06/11	
	802.11n (20 MHz)	BPSK	MCS0	01/06/11	
Maximum Peak Conducted Output Power	802.11b	DSSS	1 Mbps	01/06/11	
	802.11g	OFDM	6 Mbps	01/06/11	
	802.11n (20 MHz)	BPSK	MCS0	01/06/11	
Radiated Spurious Emission (30 MHz to 1 GHz)	802.11n (20 MHz)	OFDM	MCS0	06	
Radiated Spurious Emission (above 1 GHz)	802.11b	DSSS	1 Mbps	01/06/11	
	802.11g	OFDM	6 Mbps	01/06/11	
	802.11n (20 MHz)	BPSK	MCS0	01/06/11	
Restricted Bands	802.11b	DSSS	1 Mbps	01/06/11	
	802.11g	OFDM	6 Mbps	01/06/11	
	802.11n (20 MHz)	BPSK	MCS0	01/06/11	
Antenna Requirement	---		---	---	

5745-5825 MHz Band					
Test Items	**IEEE**	**Mode**	**Data Rate**	**Channel**	**Note**
Conducted Emission	802.11a	OFDM	6 Mbps	157	
Antenna conducted Spurious Emission	802.11a	OFDM	6 Mbps	149/157/165	
	802.11n (20 MHz)	BPSK	MCS0	149/157/165	
6 dB Bandwidth	802.11a	OFDM	6 Mbps	149/157/165	
	802.11n (20 MHz)	BPSK	MCS0	149/157/165	
Maximum Peak Conducted Output Power	802.11a	OFDM	6 Mbps	149/157/165	
	802.11n (20 MHz)	BPSK	MCS0	149/157/165	
Radiated Spurious Emission (30 MHz to 1 GHz)	802.11n (20 MHz)	OFDM	MCS0	157	
Radiated Spurious Emission (above 1 GHz)	802.11a	OFDM	6 Mbps	149/157/165	
	802.11n (20 MHz)	BPSK	MCS0	149/157/165	
Antenna Requirement	---		---	---	

NOTE: The measurements are performed at the high, middle, low available channels.

3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

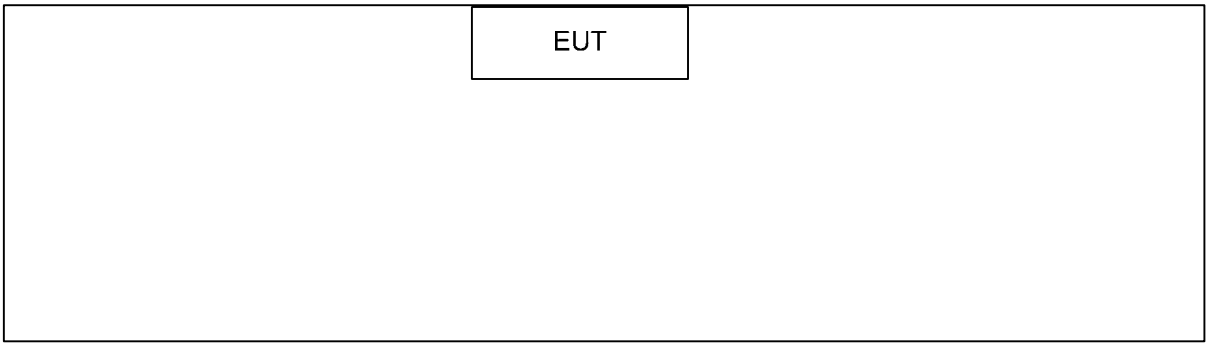
During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final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

2412-2462 MHz Band						
IEEE	802.11b			802.11g		
Test software Version	SRU v3.03.10			SRU v3.03.10		
Frequency	2412 MHz	2437 MHz	2462 MHz	2412 MHz	2437 MHz	2462 MHz
Parameter	100	100	100	100	100	100

2412-2462 MHz Band						
IEEE	802.11n (20 MHz)					
Test software Version	SRU v3.03.10					
Frequency	2412 MHz	2437 MHz	2462 MHz			
Parameter	100	100	100			

5745-5825 MHz Band						
IEEE	802.11a			802.11n (20 MHz)		
Test software Version	SRU v3.03.10			SRU v3.03.10		
Frequency	5745 MHz	5785 MHz	5825 MHz	5745 MHz	5785 MHz	5825 MHz
Parameter	100	100	100	100	100	100

3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
E-1	Mobile Computer	CIPHERLAB	9700	Q3N-9700	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note
N/A	-	-	-	-

NOTE: The support equipment was authorized by Declaration of Conformity (DOC).

4 CONDUCTED EMISSION

4.1 LIMIT

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 - 0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 - 5.0	73.00	60.00	56.00	46.00
5.0 - 30.0	73.00	60.00	60.00	50.00

NOTE:

1. The tighter limit applies at the band edges.
2. The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
3. The test result calculated as following:
   Measurement Value = Reading Level + Correct Factor
   Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)
   Margin Level = Measurement Value – Limit Value

4.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	Schwarzbeck	NSLK 8127	8127685	Jan. 08, 2015
2	Test Cable	TIMES	CFD300-NL	C01	Jun. 16, 2014
3	Spectrum Analyzer	Agilent	N9020A	MY51160196	Jun. 20, 2014
4	Measurement Software	EZ	EZ_EMC (Version NB-02A)	N/A	N/A

NOTE: **N/A: denotes no modelname, no serial No. or no calibration specified.**

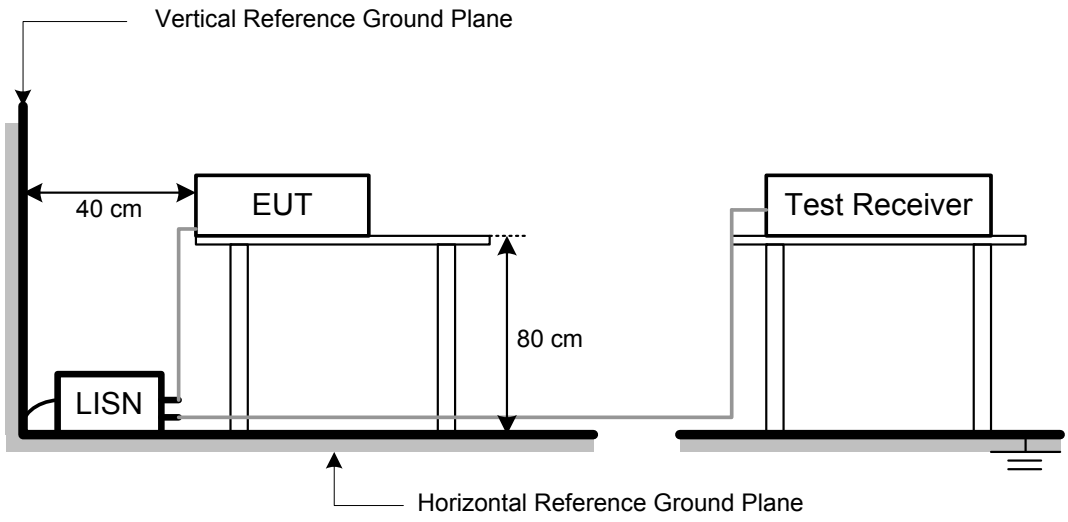
4.3 TEST PROCEDURES

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

NOTE:

a. Reading in which marked as Peak, QP or AVG means measurements by using are Quasi-Peak or Average Mode with Detector BW=9 kHz (6 dB Bandwidth).
b. All readings are Peak Mode value unless otherwise stated QP or AVG in column of Note. If the Peak or QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only Peak or QP Mode was measured, but AVG Mode didn‘t perform.

4.4 TEST SETUP LAYOUT



4.5 DEVIATION FROM TEST STANDARD

No deviation

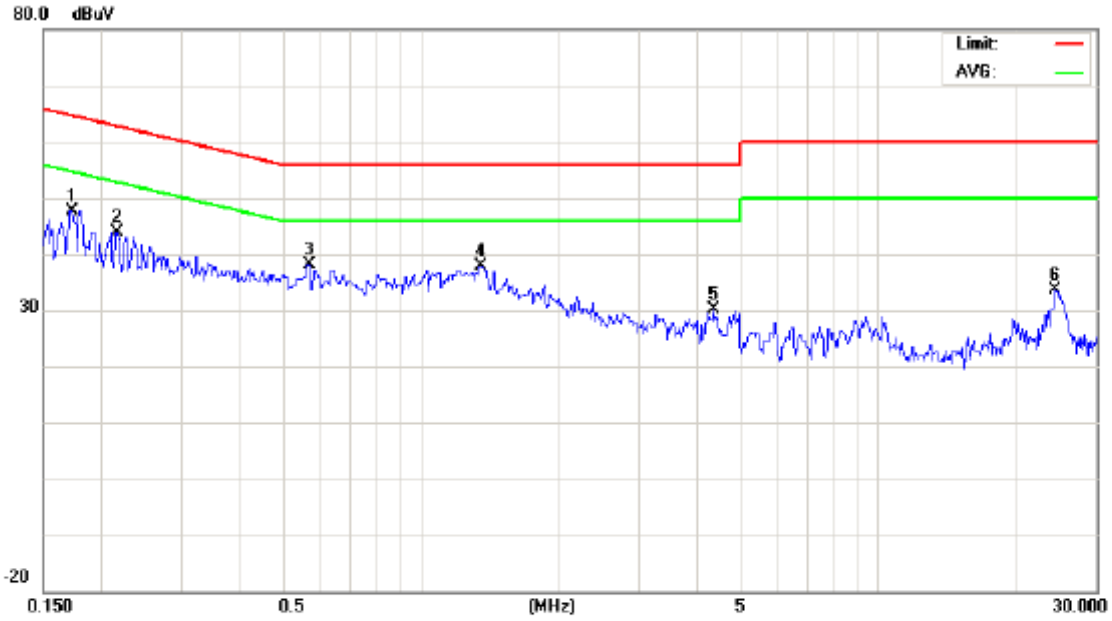
4.6 EUT OPERATING CONDITIONS

The EUT used during radiated and/or conducted emission measurement was designed to exercise in a manner similar to a typical use.

4.7 TEST RESULTS - 2412-2462 MHZ

EUT	Mobile Computer	Model Name	9700
Temperature	24 ° C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

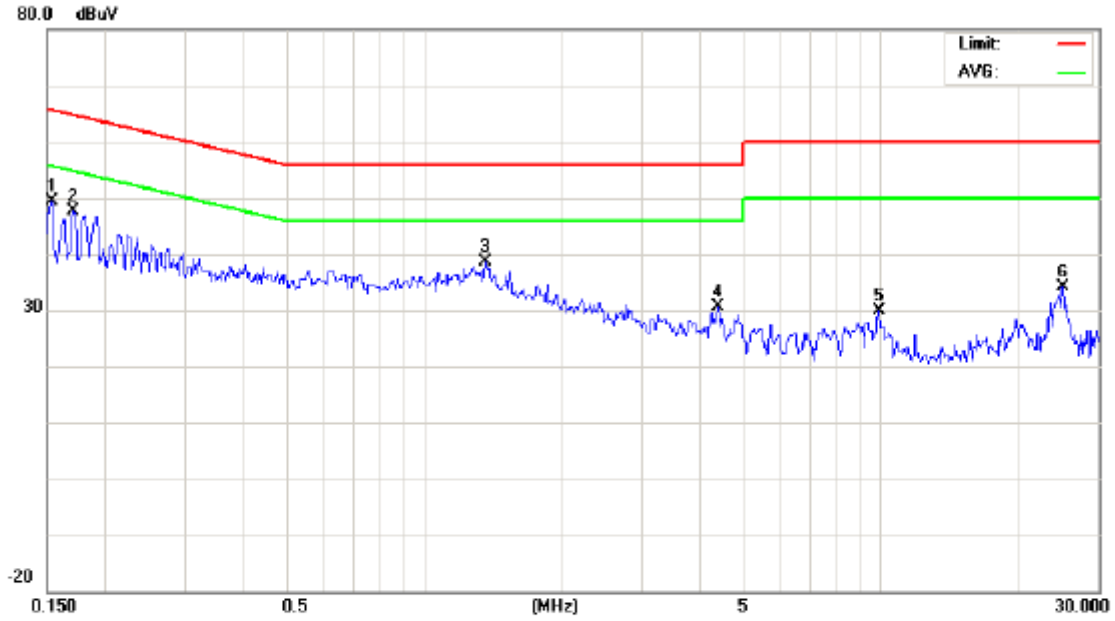
Phase: Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1723	38.80	8.93	47.73	64.85	-17.12	peak	
2		0.2171	34.69	9.20	43.89	62.93	-19.04	peak	
3		0.5720	29.08	8.97	38.05	56.00	-17.95	peak	
4		1.3459	28.93	9.06	37.99	56.00	-18.01	peak	
5		4.3520	20.42	9.68	30.10	56.00	-25.90	peak	
6		24.3498	23.29	10.22	33.51	60.00	-26.49	peak	

EUT	Mobile Computer	Model Name	9700
Temperature	24 ° C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

Phase: Neutral

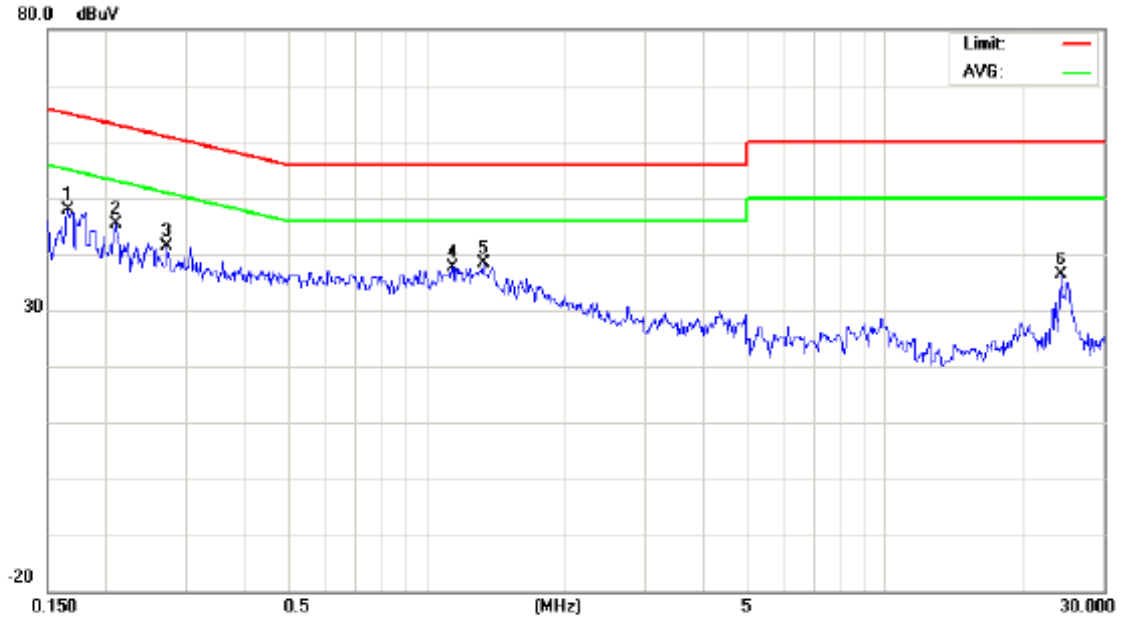


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1527	40.60	8.66	49.26	65.85	-16.59	peak	
2		0.1709	38.71	8.91	47.62	64.92	-17.30	peak	
3		1.3639	29.56	9.07	38.63	56.00	-17.37	peak	
4		4.4060	20.81	9.70	30.51	56.00	-25.49	peak	
5		9.9000	19.86	9.95	29.81	60.00	-30.19	peak	
6		24.9499	23.80	10.23	34.03	60.00	-25.97	peak	

4.8 TEST RESULTS - 5745-5825 MHZ

EUT	Mobile Computer	Model Name	9700
Temperature	24 ° C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5785 MHz		

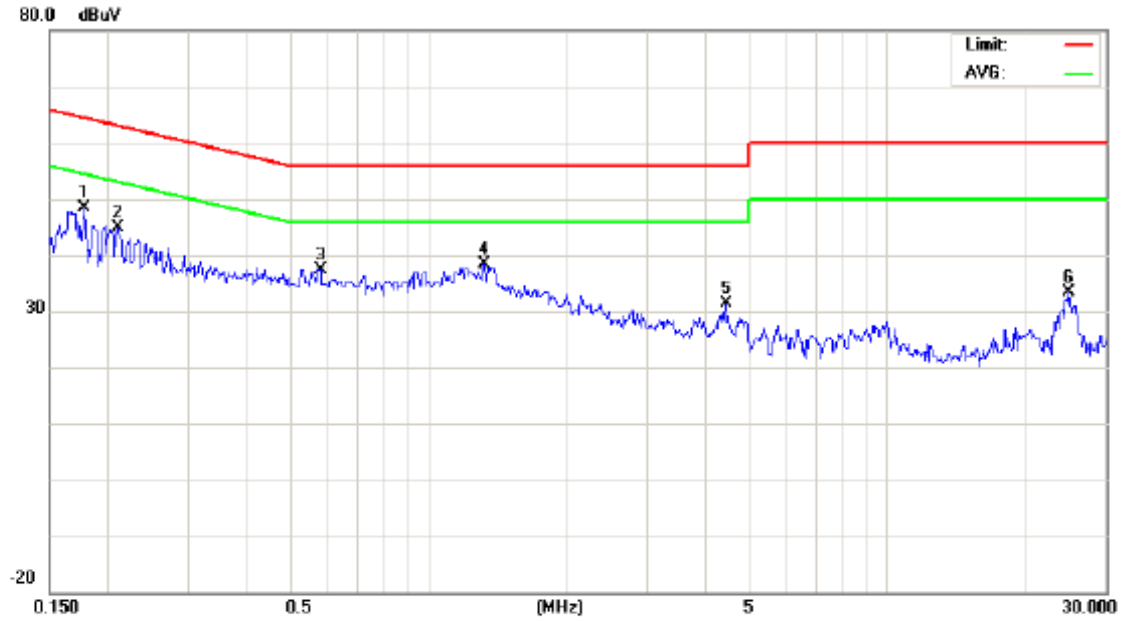
Phase: Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1652	39.07	8.83	47.90	65.20	-17.30	peak	
2		0.2108	36.14	9.24	45.38	63.17	-17.79	peak	
3		0.2724	32.49	8.83	41.32	61.04	-19.72	peak	
4		1.1389	28.62	8.98	37.60	56.00	-18.40	peak	
5		1.3369	29.37	9.06	38.43	56.00	-17.57	peak	
6		24.0998	26.20	10.21	36.41	60.00	-23.59	peak	

EUT	Mobile Computer	Model Name	9700
Temperature	24 ° C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5785 MHz		

Phase: Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1785	39.48	9.01	48.49	64.56	-16.07	peak	
2		0.2101	35.75	9.24	44.99	63.20	-18.21	peak	
3		0.5810	28.44	8.96	37.40	56.00	-18.60	peak	
4		1.3189	29.40	9.05	38.45	56.00	-17.55	peak	
5		4.4329	21.60	9.71	31.31	56.00	-24.69	peak	
6		24.8999	23.13	10.23	33.36	60.00	-26.64	peak	

5 ANTENNA CONDUCTED SPURIOUS EMISSION

5.1 LIMIT

Test Item	Frequency Range (MHz)	Limit
Antenna conducted Spurious Emission	30-25000	20 dB less than the peak value of fundamental frequency

5.2 MEASUREMENT INSTRUMENTS LIST

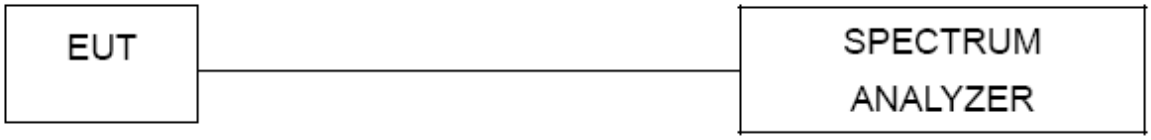
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014

NOTE: **N/A: denotes no modelname, no serial No. or no calibration specified.**

5.3 TEST PROCEDURES

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = Auto.

5.4 TEST SETUP LAYOUT



5.5 DEVIATION FROM TEST STANDARD

No deviation

5.6 EUT OPERATING CONDITIONS

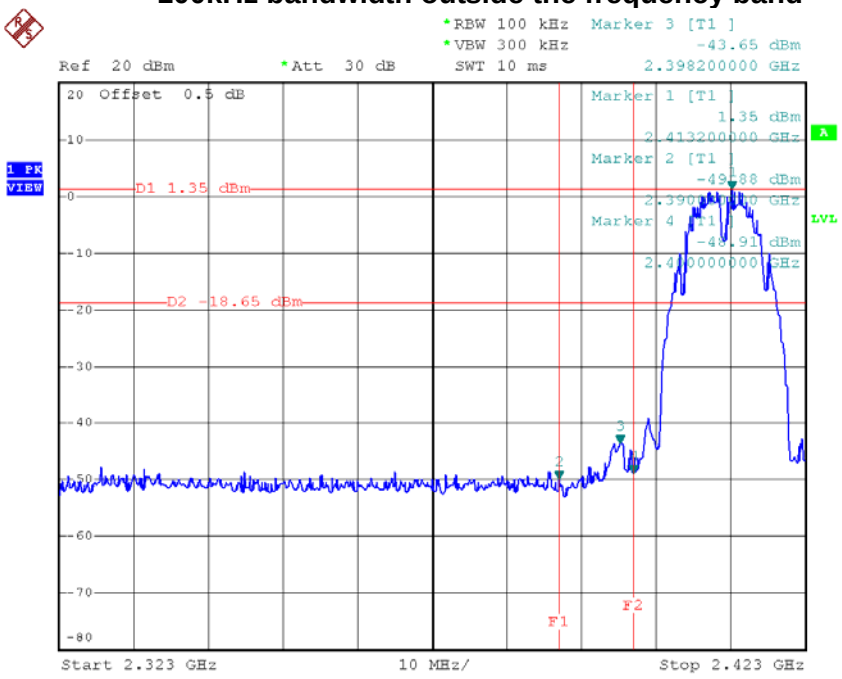
The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing.

5.7 TEST RESULTS - 2412-2462 MHZ

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b		

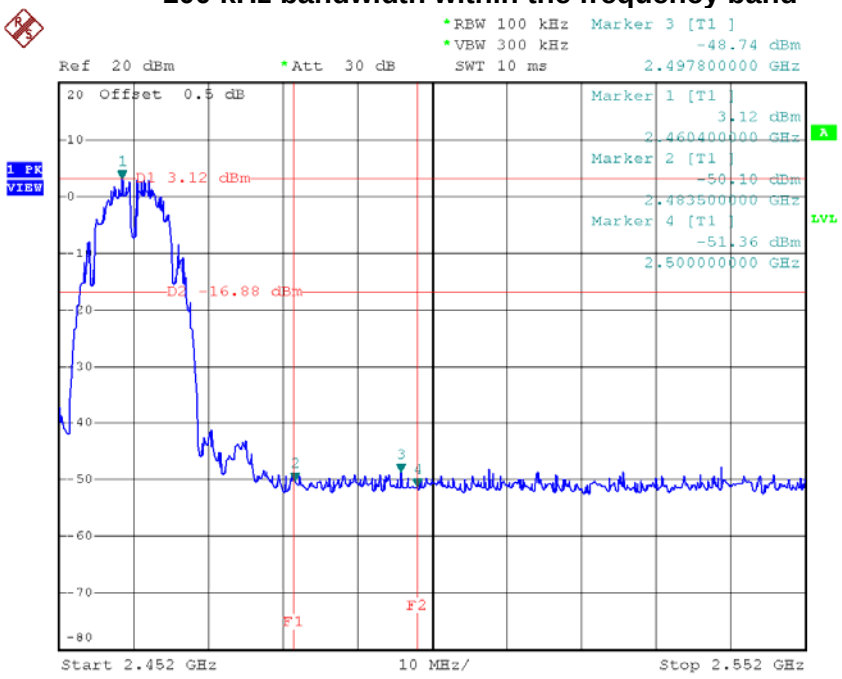
Channel of Worst Data			
The max. radio frequency power in any 100 kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2398.20	-43.65	2497.80	-48.74
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

IEEE 802.11b/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



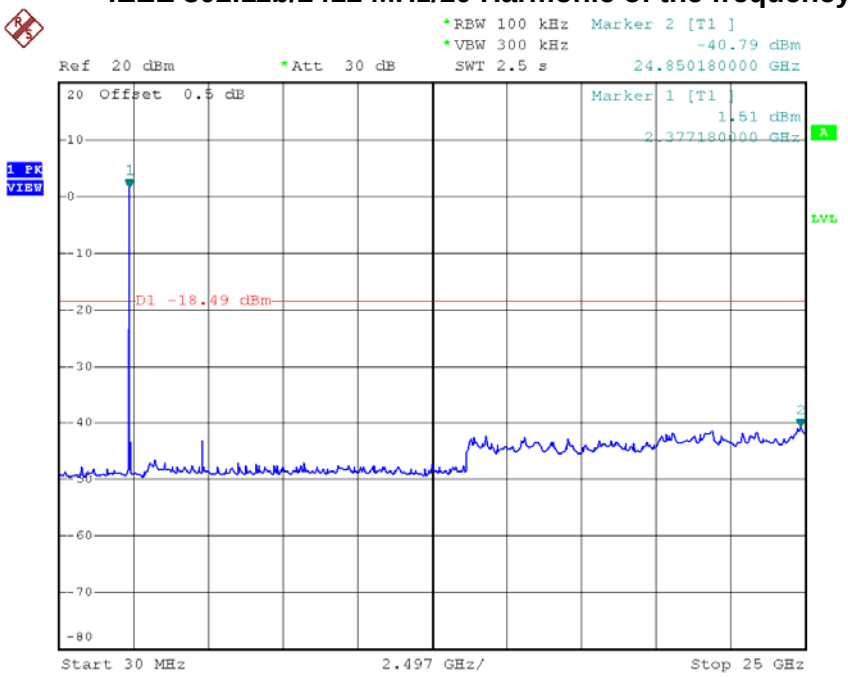
Date: 10.APR.2014 16:19:56

IEEE 802.11b/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



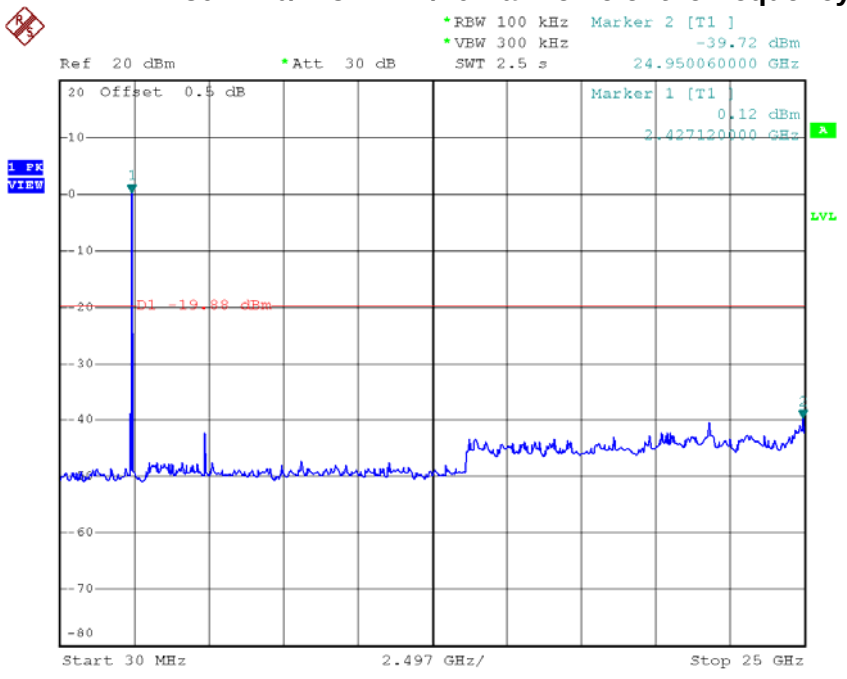
Date: 10.APR.2014 16:26:33

IEEE 802.11b/2412 MHz/10 Harmonic of the frequency



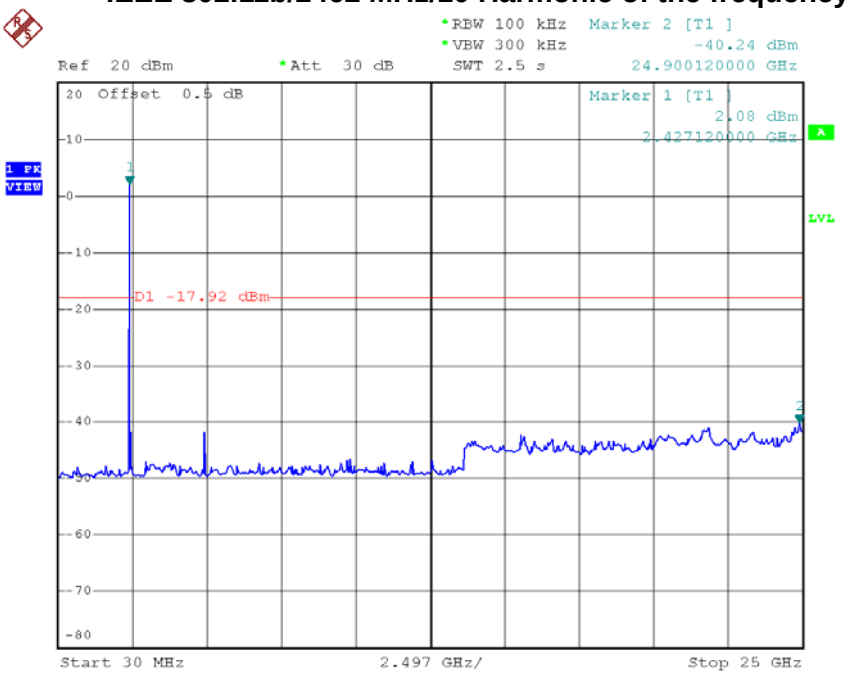
Date: 10.APR.2014 16:19:29

IEEE 802.11b/2437 MHz/10 Harmonic of the frequency



Date: 10.APR.2014 16:23:41

IEEE 802.11b/2462 MHz/10 Harmonic of the frequency

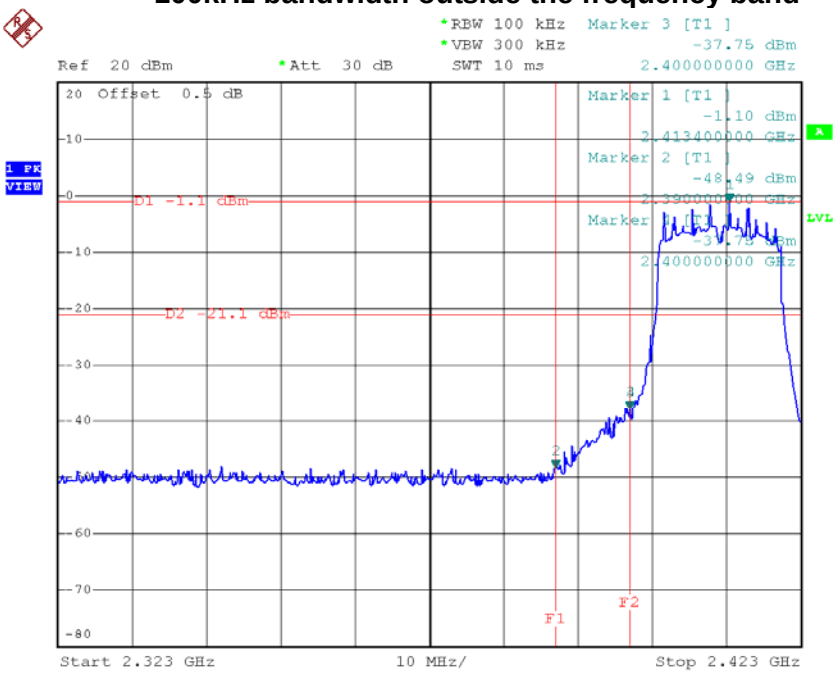


Date: 10.APR.2014 16:26:07

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g		

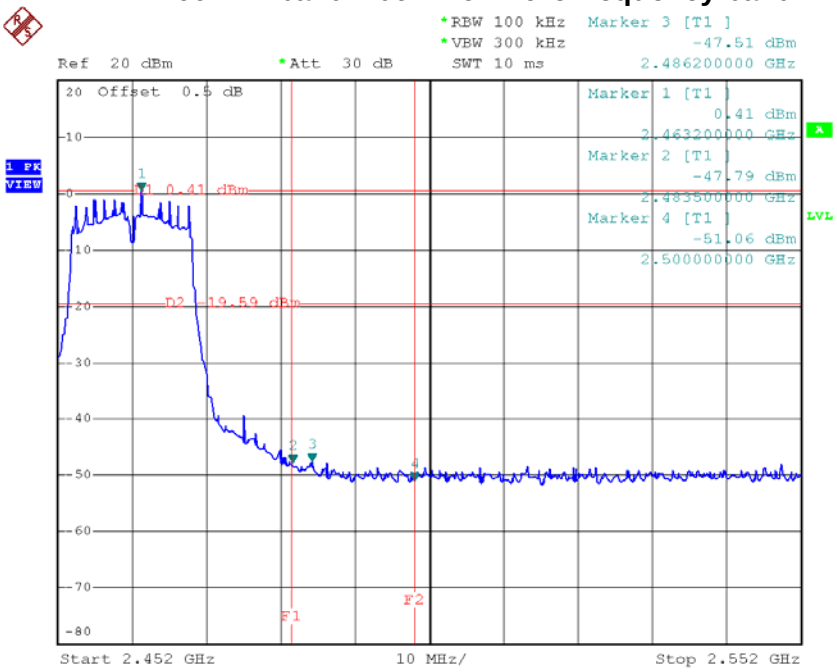
Channel of Worst Data			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2400.00	-37.75	2486.20	-47.51
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

IEEE 802.11g/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



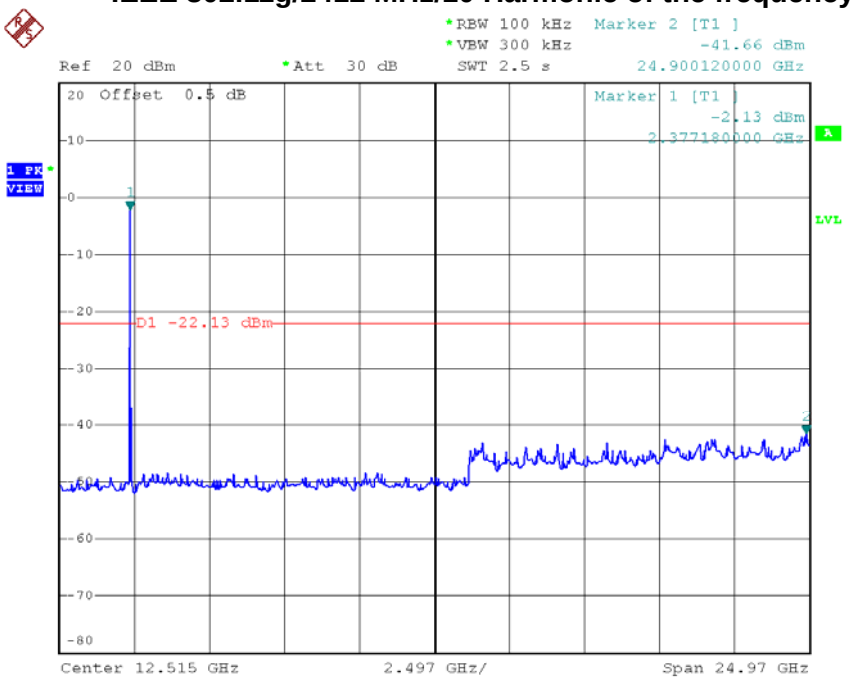
Date: 10.APR.2014 16:42:29

IEEE 802.11g/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



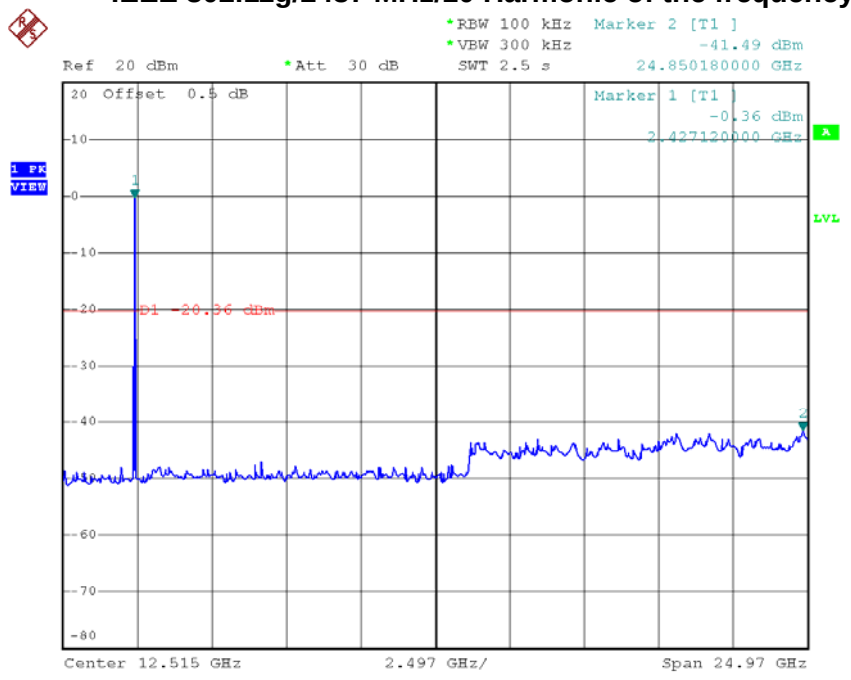
Date: 10.APR.2014 16:49:52

IEEE 802.11g/2412 MHz/10 Harmonic of the frequency



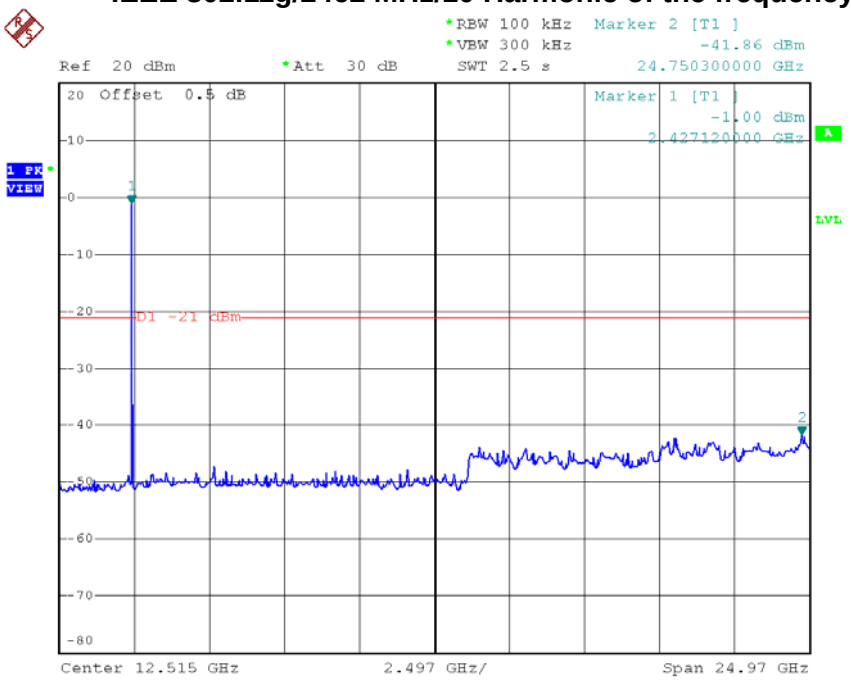
Date: 10.APR.2014 16:41:49

IEEE 802.11g/2437 MHz/10 Harmonic of the frequency



Date: 10.APR.2014 16:45:11

IEEE 802.11g/2462 MHz/10 Harmonic of the frequency

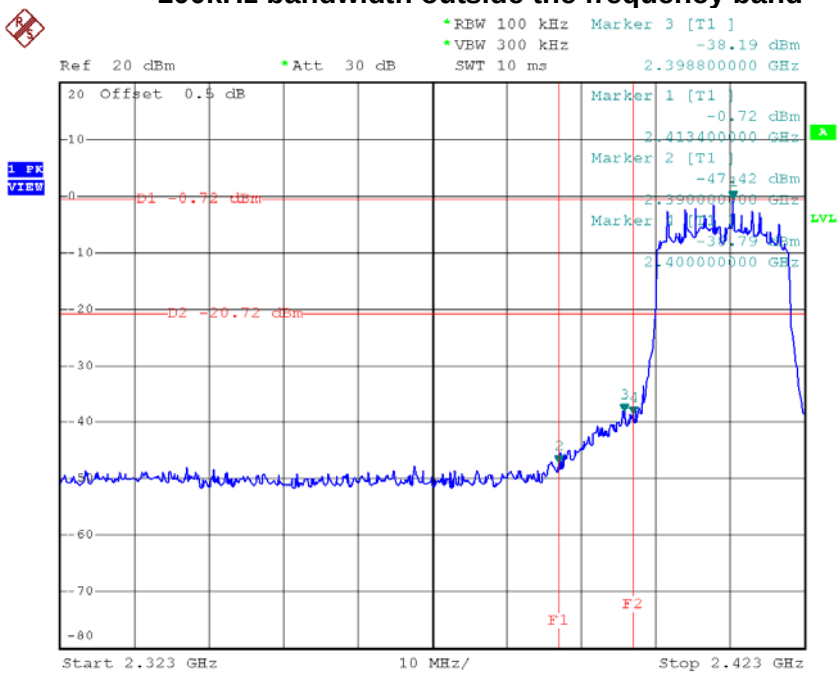


Date: 10.APR.2014 16:49:17

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)		

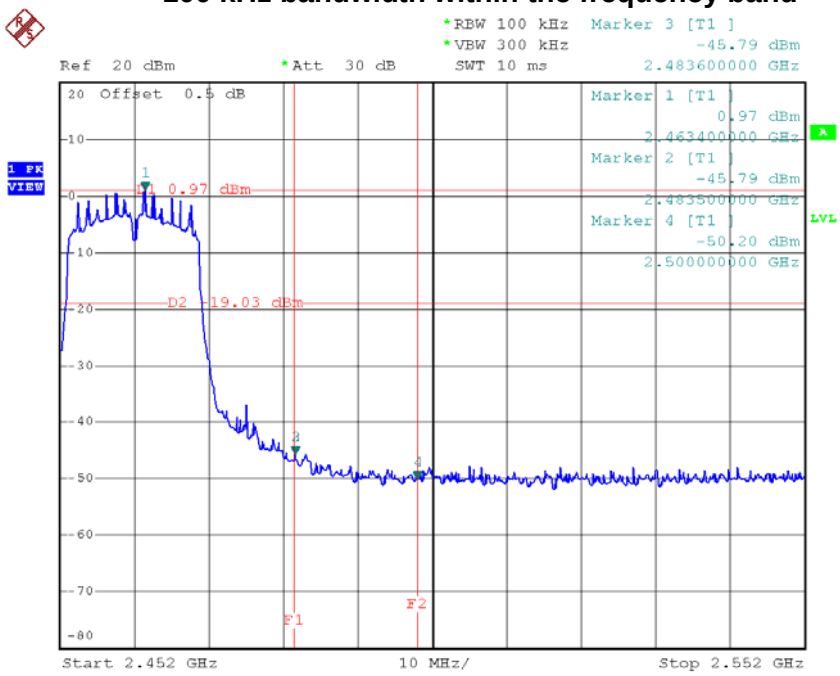
Channel of Worst Data			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
2398.80	-38.19	2485.50	-45.79
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

IEEE 802.11n (20 MHz)/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



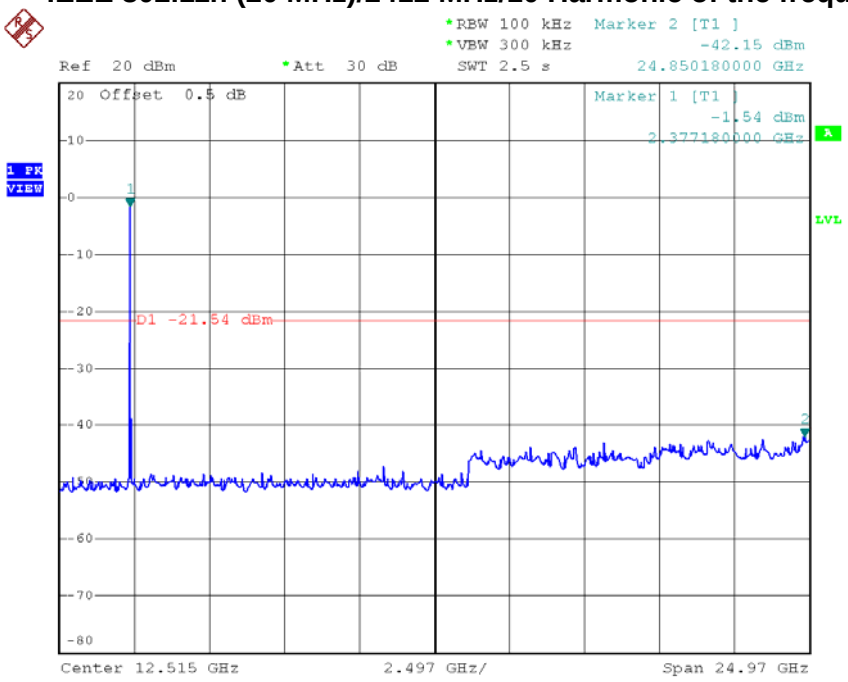
Date: 10.APR.2014 17:00:25

IEEE 802.11n (20 MHz)/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



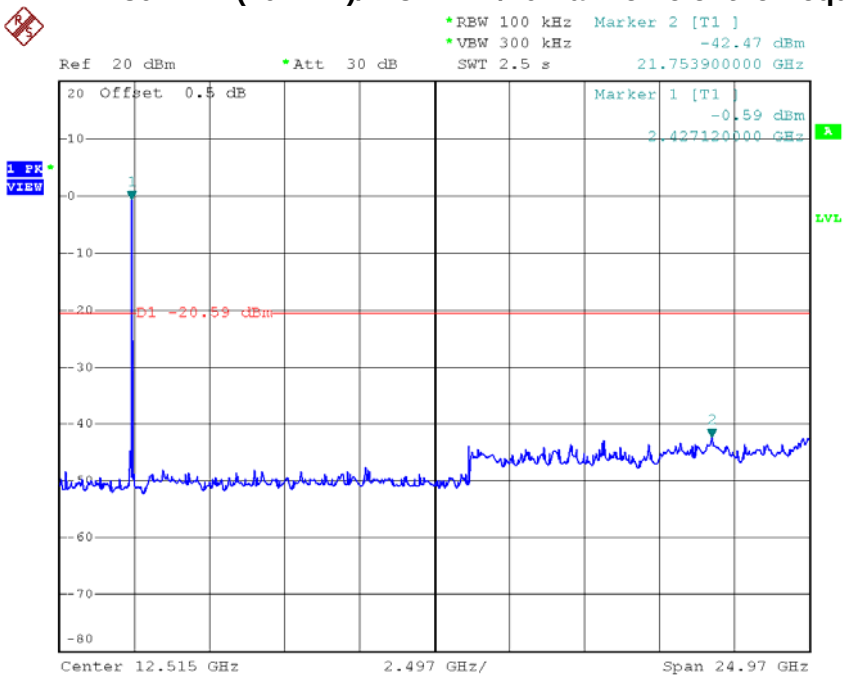
Date: 10.APR.2014 17:10:54

IEEE 802.11n (20 MHz)/2412 MHz/10 Harmonic of the frequency



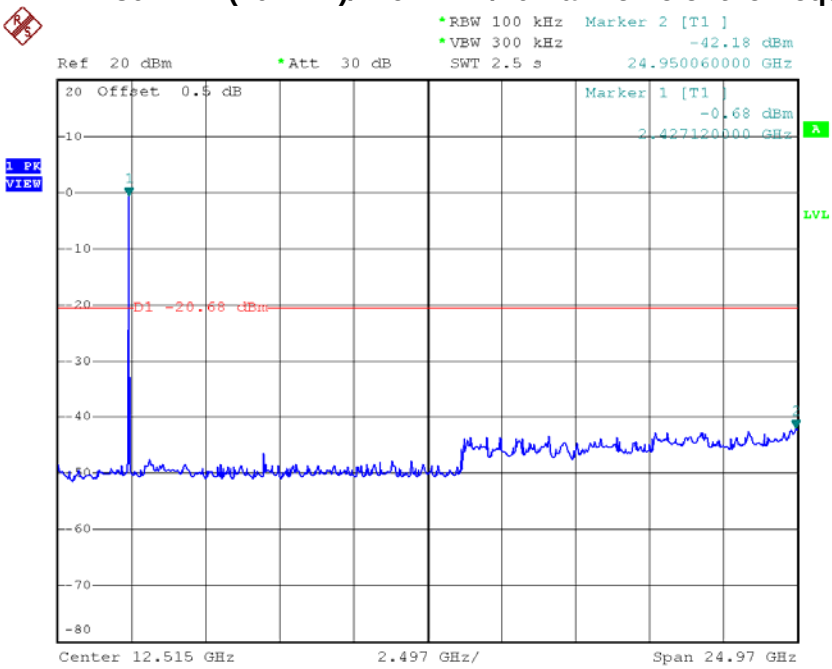
Date: 10.APR.2014 16:59:09

IEEE 802.11n (20 MHz)/2437 MHz/10 Harmonic of the frequency



Date: 10.APR.2014 17:05:14

IEEE 802.11n (20 MHz)/2462 MHz/10 Harmonic of the frequency



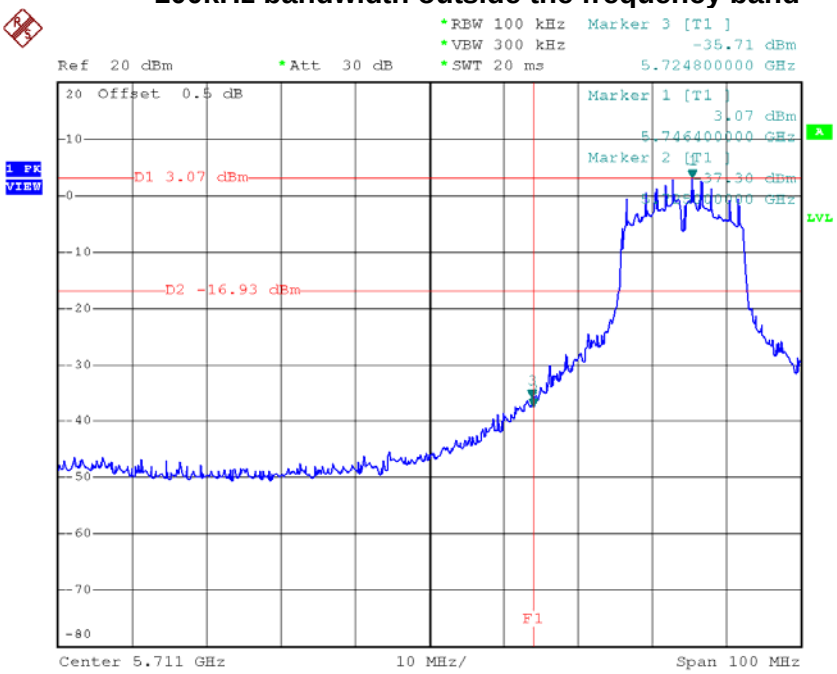
Date: 10.APR.2014 17:10:05

5.8 TEST RESULTS - 5745-5825 MHZ

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a		

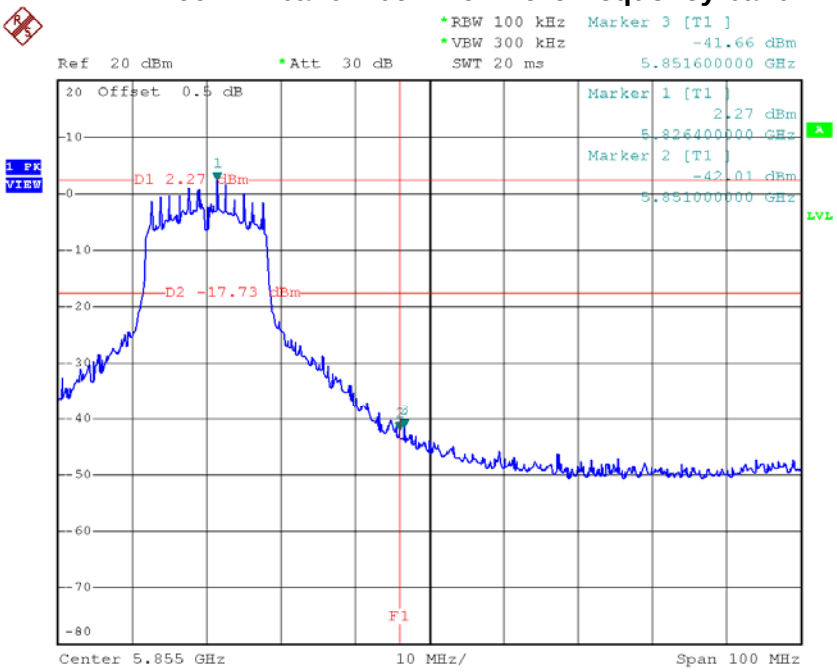
Channel of Worst Data			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5724.80	-35.71	5851.60	-41.66
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

IEEE 802.11a/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



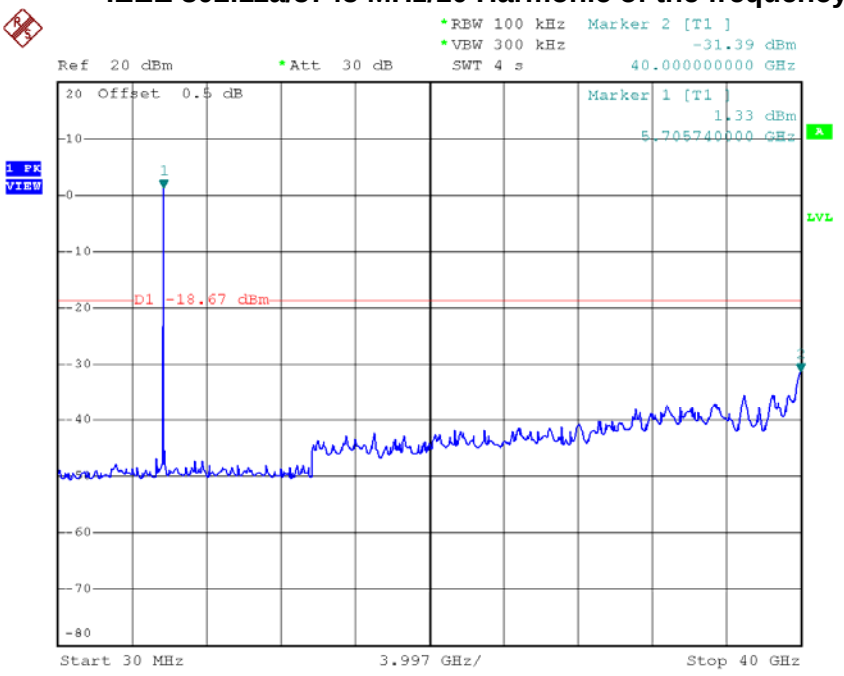
Date: 17.APR.2014 15:19:14

IEEE 802.11a/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



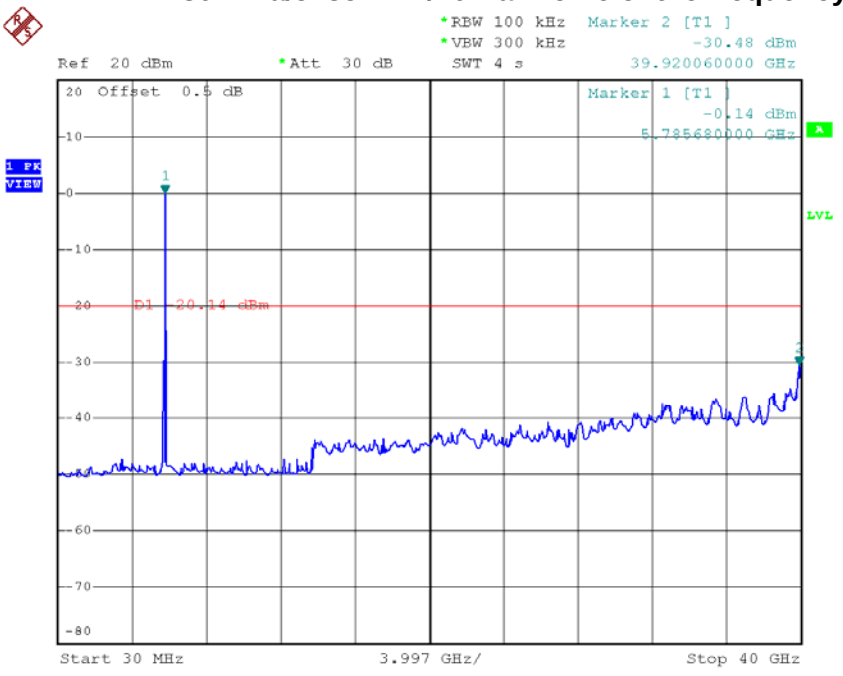
Date: 17.APR.2014 15:35:02

IEEE 802.11a/5745 MHz/10 Harmonic of the frequency



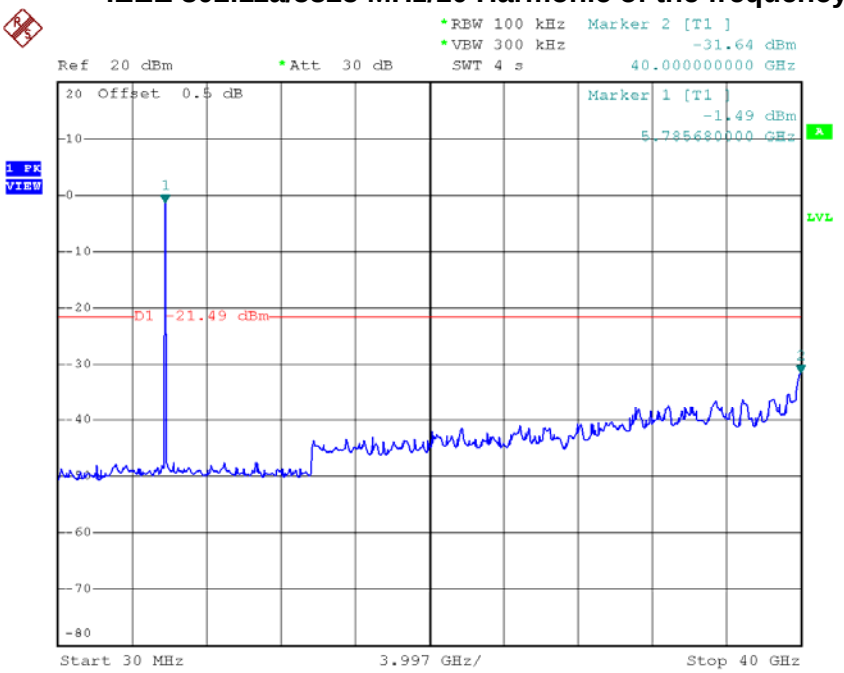
Date: 17.APR.2014 15:11:52

IEEE 802.11a/5785 MHz/10 Harmonic of the frequency



Date: 17.APR.2014 15:21:43

IEEE 802.11a/5825 MHz/10 Harmonic of the frequency

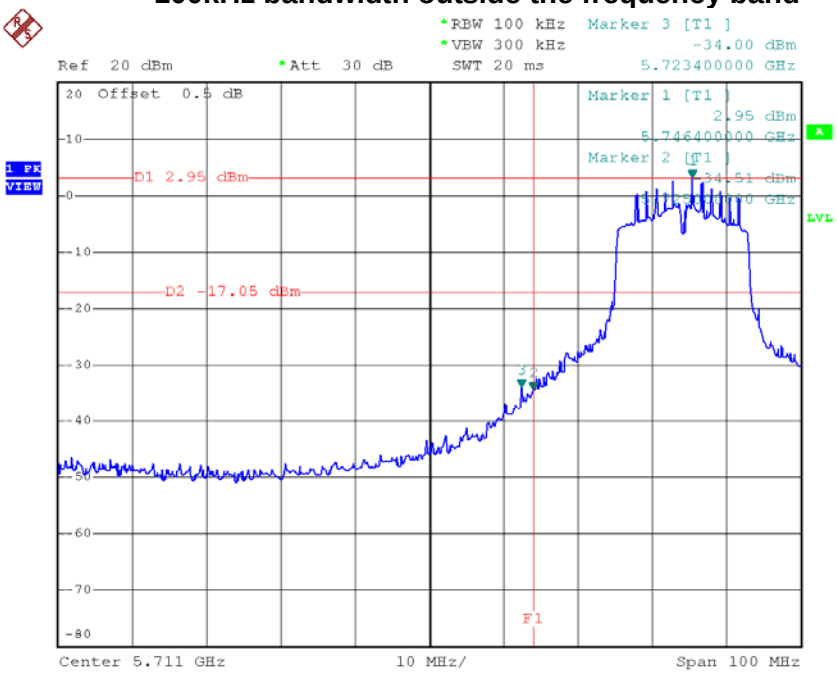


Date: 17.APR.2014 15:27:31

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)		

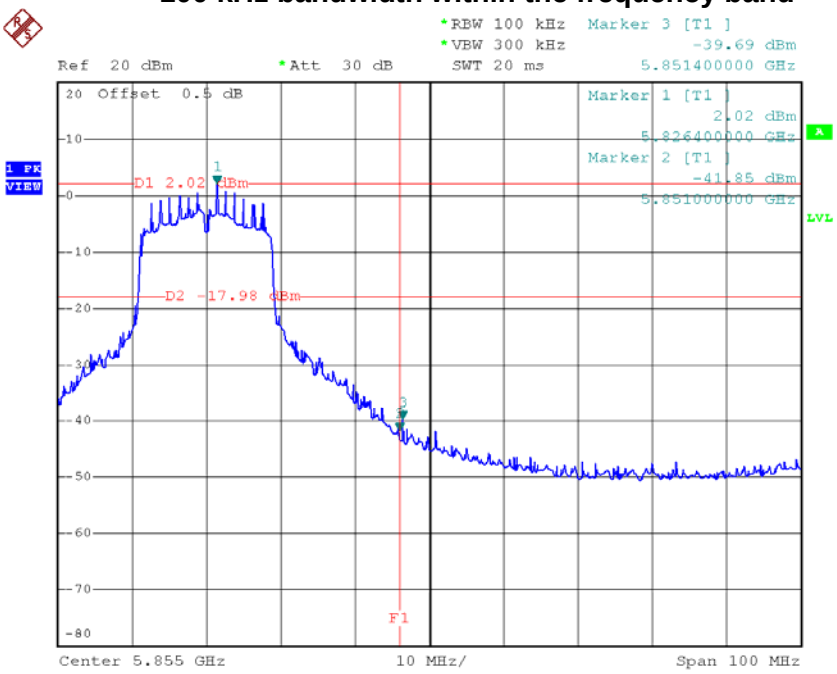
Channel of Worst Data			
The max. radio frequency power in any 100kHz bandwidth outside the frequency band		The max. radio frequency power in any 100 kHz bandwidth within the frequency band.	
FREQUENCY(MHz)	POWER(dBm)	FREQUENCY(MHz)	POWER(dBm)
5723.40	-34.00	5851.40	-39.69
Result			
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.			

IEEE 802.11n (20 MHz)/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



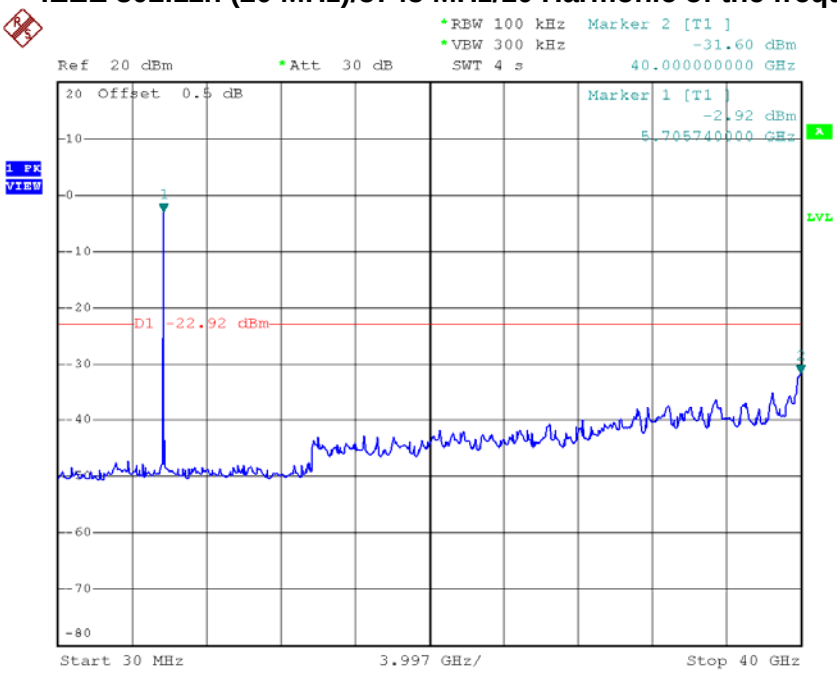
Date: 17.APR.2014 16:04:24

IEEE 802.11n (20 MHz)/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



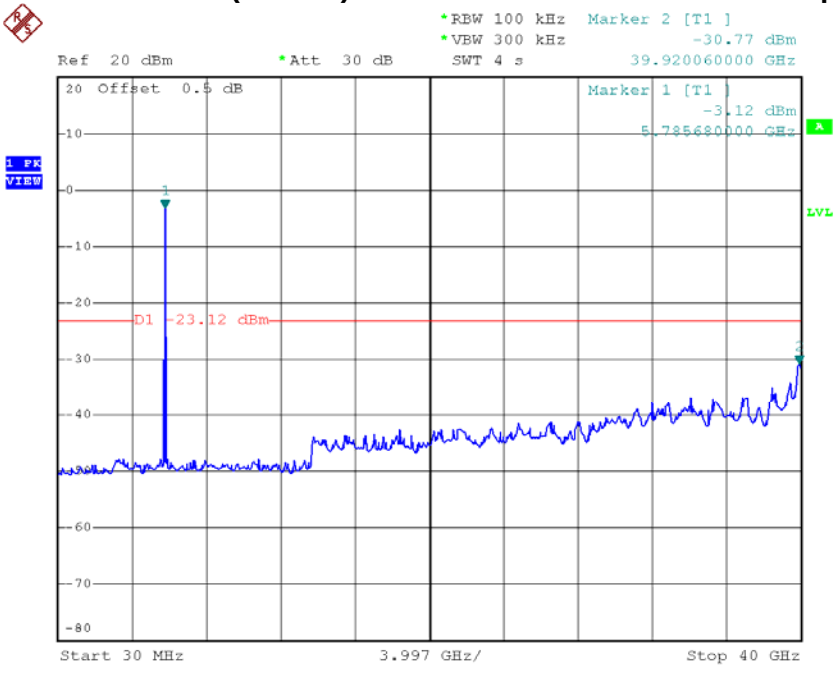
Date: 17.APR.2014 16:12:20

IEEE 802.11n (20 MHz)/5745 MHz/10 Harmonic of the frequency



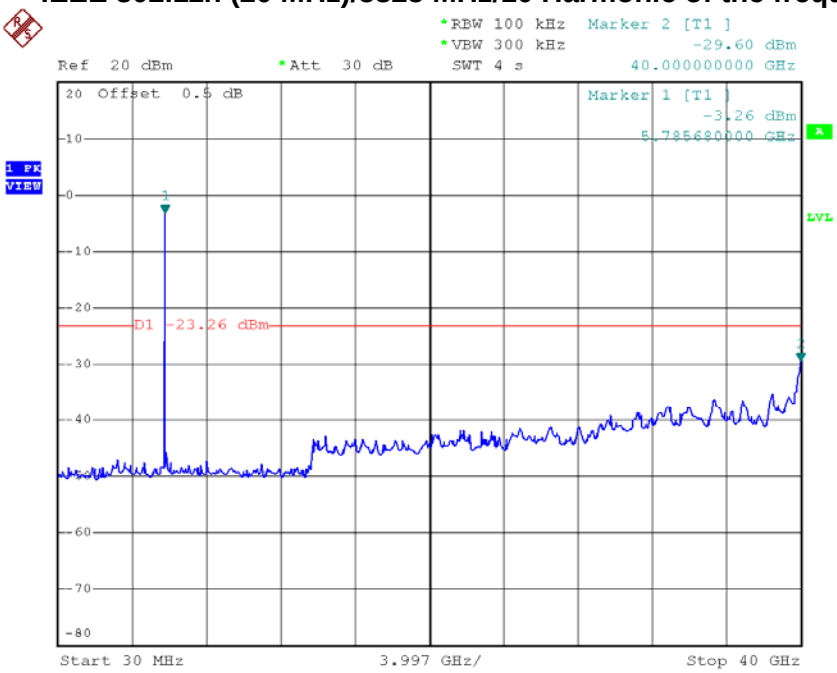
Date: 17.APR.2014 16:00:18

IEEE 802.11n (20 MHz)/5785 MHz/10 Harmonic of the frequency



Date: 17.APR.2014 16:05:29

IEEE 802.11n (20 MHz)/5825 MHz/10 Harmonic of the frequency



Date: 17.APR.2014 16:09:39

6 6 DB BANDWIDTH

6.1 LIMIT

Test Item	Frequency Range (MHz)	Limit
Bandwidth	2400-2483.5	>= 500KHz (6dB bandwidth)

6.2 MEASUREMENT INSTRUMENTS LIST

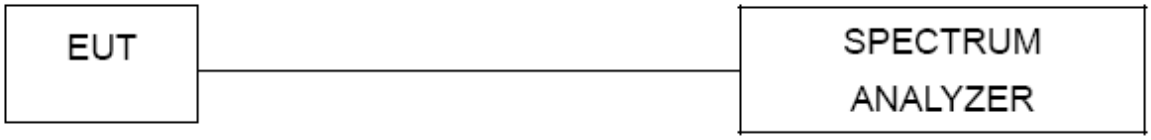
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014

NOTE: **N/A: denotes no modelname, no serial No. or no calibration specified.**

6.3 TEST PROCEDURES

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. Spectrum Setting: RBW= 100KHz, VBW=300KHz, Sweep time = Auto.

6.4 TEST SETUP LAYOUT



6.5 DEVIATION FROM TEST STANDARD

No deviation

6.6 EUT OPERATING CONDITIONS

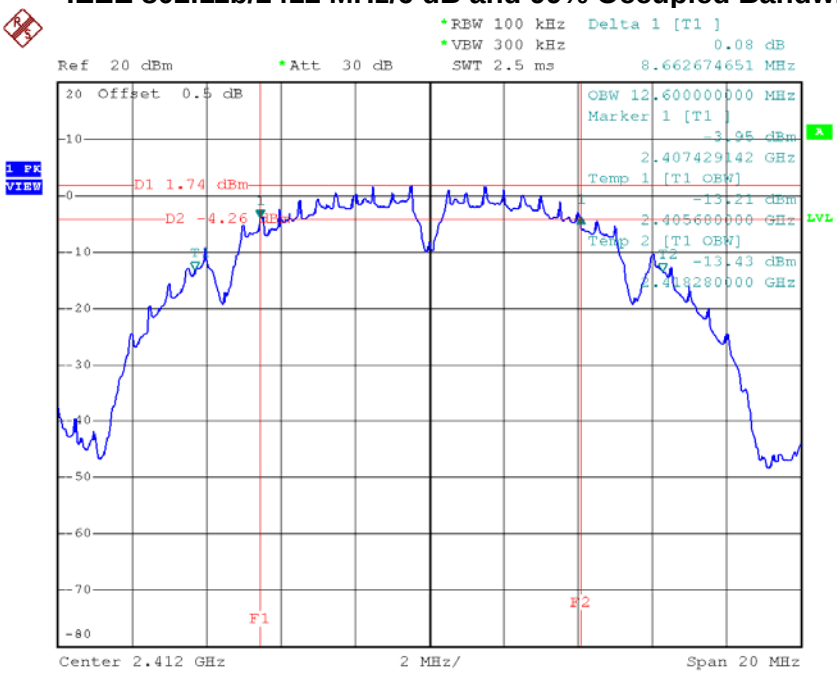
The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing.

6.7 TEST RESULTS - 2412-2462 MHZ

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz, 2437 MHz, 2462 MHz		

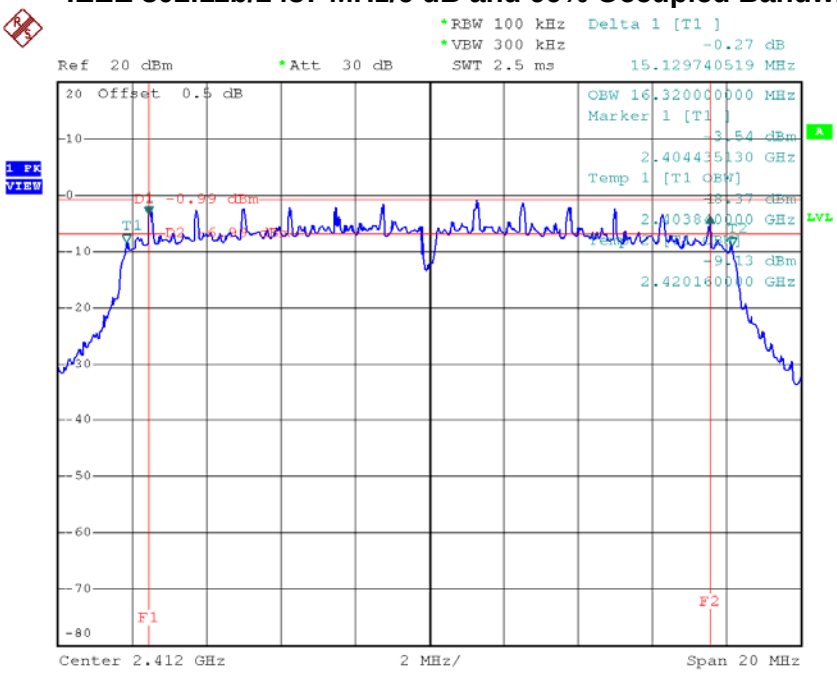
Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
2412 MHz	8.66	12.60	>=500 kHz	PASS
2437 MHz	15.13	16.32	>=500 kHz	PASS
2462 MHz	15.13	17.48	>=500 kHz	PASS

IEEE 802.11b/2412 MHz/6 dB and 99% Occupied Bandwidth



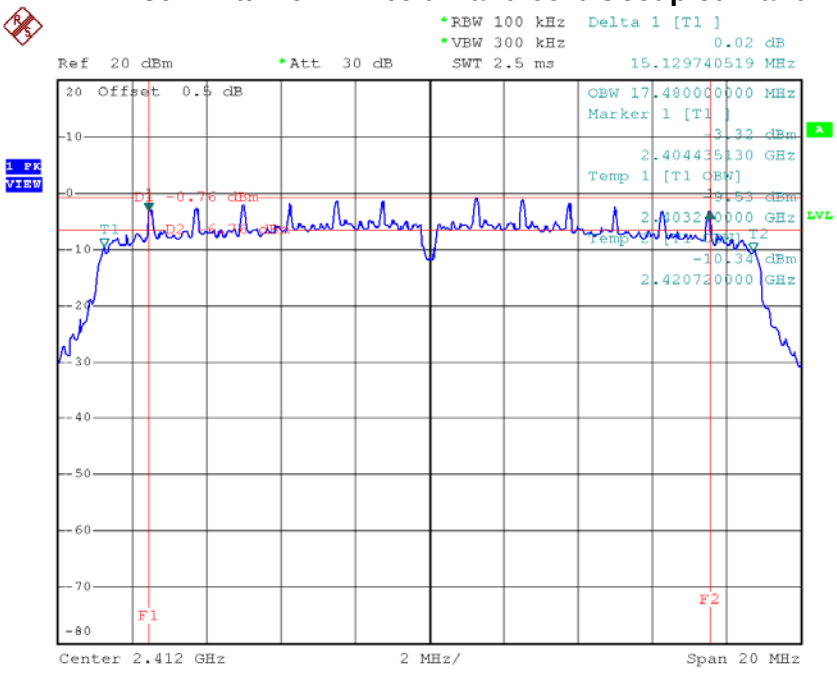
Date: 10.APR.2014 16:19:47

IEEE 802.11b/2437 MHz/6 dB and 99% Occupied Bandwidth



Date: 10.APR.2014 16:42:14

IEEE 802.11b/2462 MHz/6 dB and 99% Occupied Bandwidth

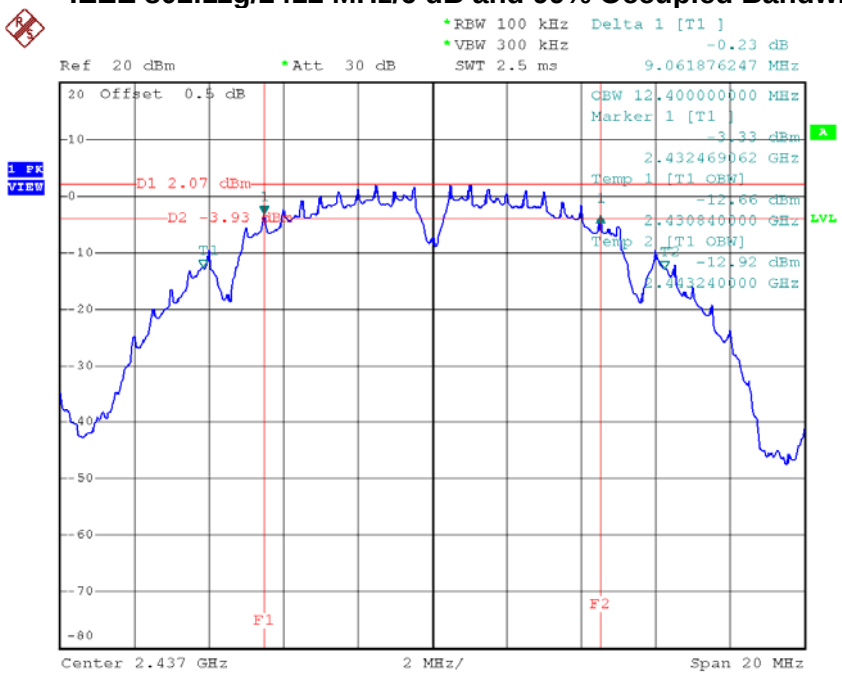


Date: 10.APR.2014 17:00:08

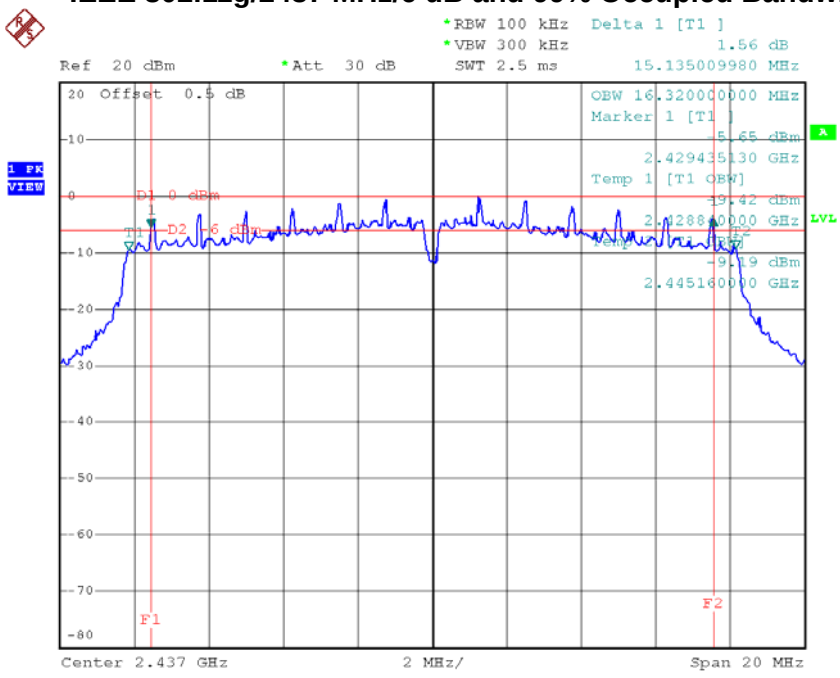
EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
2412 MHz	9.06	12.40	>=500 kHz	PASS
2437 MHz	15.14	16.32	>=500 kHz	PASS
2462 MHz	15.01	17.56	>=500 kHz	PASS

IEEE 802.11g/2412 MHz/6 dB and 99% Occupied Bandwidth

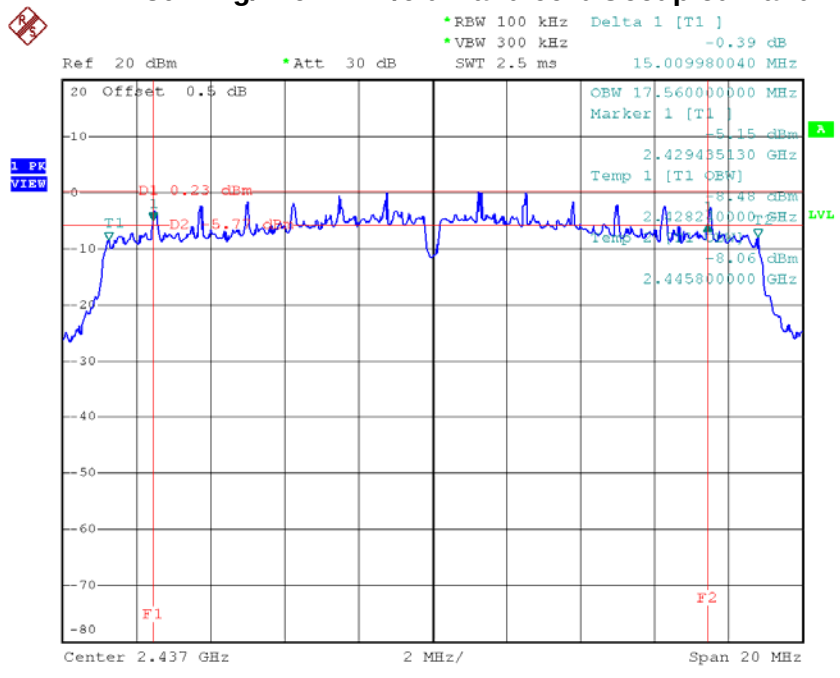


IEEE 802.11g/2437 MHz/6 dB and 99% Occupied Bandwidth



Date: 10.APR.2014 16:47:00

IEEE 802.11g/2462 MHz/6 dB and 99% Occupied Bandwidth

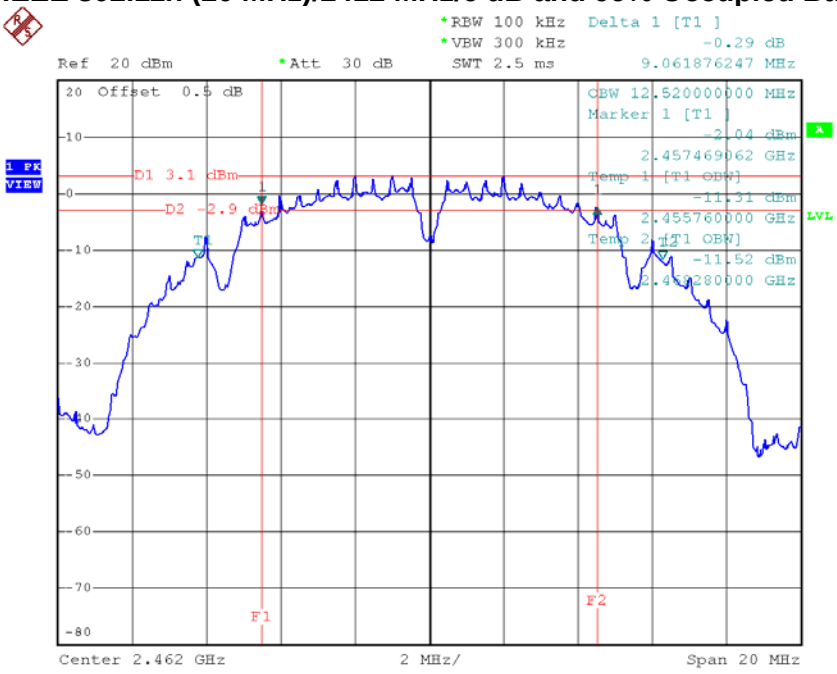


Date: 10.APR.2014 17:06:35

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz		

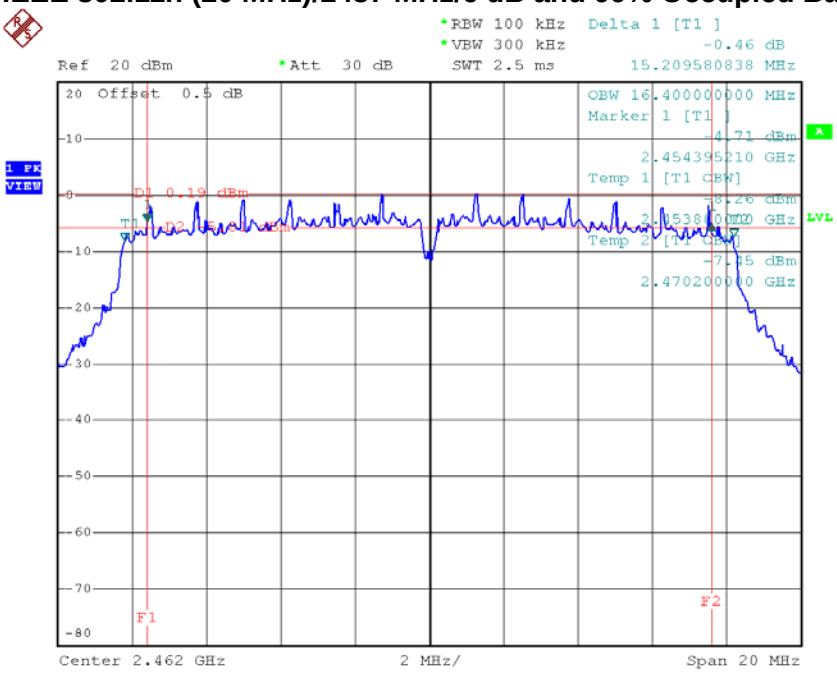
Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
2412 MHz	9.06	12.52	>=500 kHz	PASS
2437 MHz	15.21	16.40	>=500 kHz	PASS
2462 MHz	15.21	17.48	>=500 kHz	PASS

IEEE 802.11n (20 MHz)/2412 MHz/6 dB and 99% Occupied Bandwidth



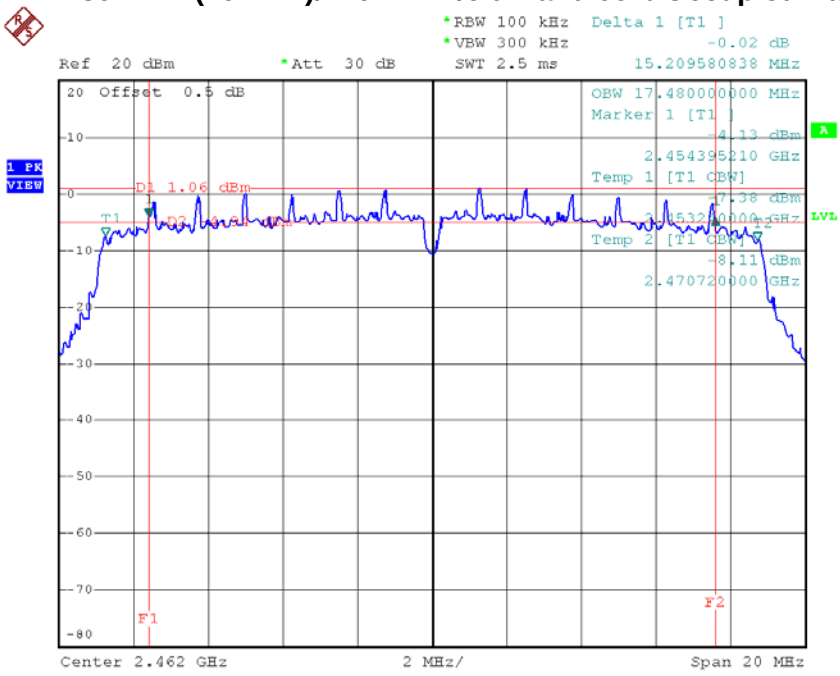
Date: 10.APR.2014 16:26:23

IEEE 802.11n (20 MHz)/2437 MHz/6 dB and 99% Occupied Bandwidth



Date: 10.APR.2014 16:49:37

IEEE 802.11n (20 MHz)/2462 MHz/6 dB and 99% Occupied Bandwidth



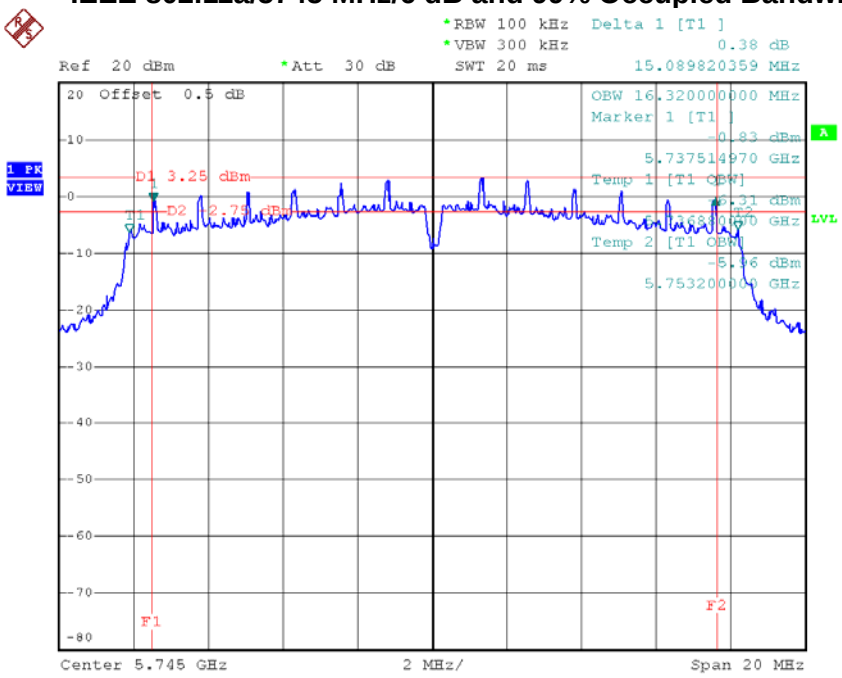
Date: 10.APR.2014 17:10:32

6.8 TEST RESULTS - 5745-5825 MHZ

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5745 MHz, 5785 MHz, 5825 MHz		

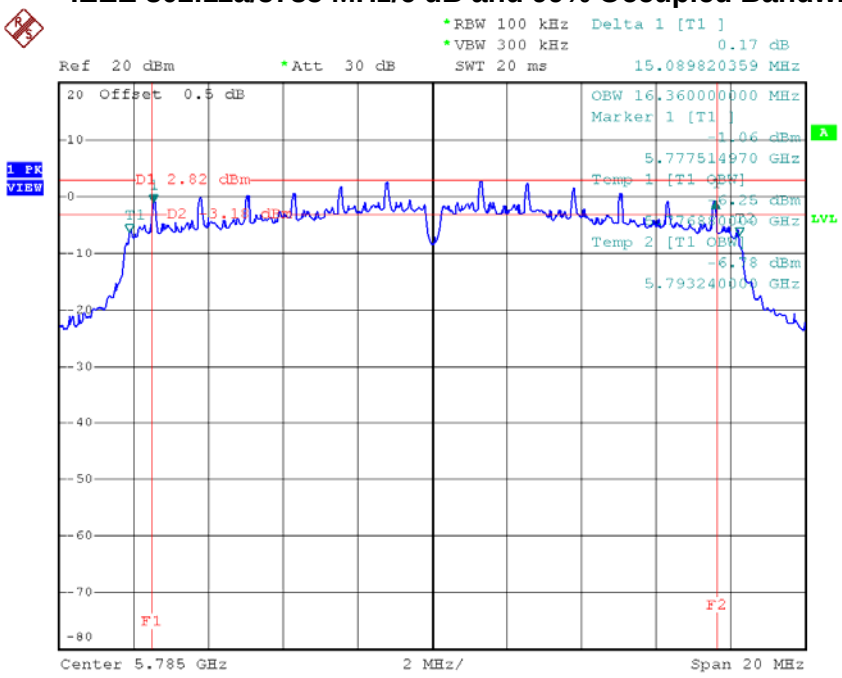
Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
5745 MHz	15.09	16.32	>=500 kHz	PASS
5785 MHz	15.09	16.36	>=500 kHz	PASS
5825 MHz	15.09	16.32	>=500 kHz	PASS

IEEE 802.11a/5745 MHz/6 dB and 99% Occupied Bandwidth



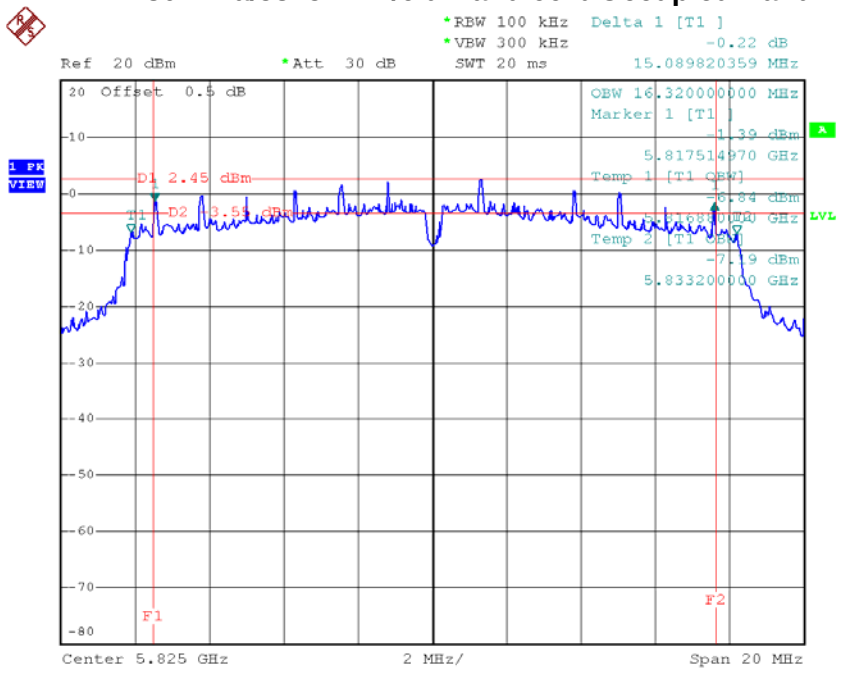
Date: 17.APR.2014 15:12:11

IEEE 802.11a/5785 MHz/6 dB and 99% Occupied Bandwidth



Date: 17.APR.2014 15:22:46

IEEE 802.11a/5825 MHz/6 dB and 99% Occupied Bandwidth

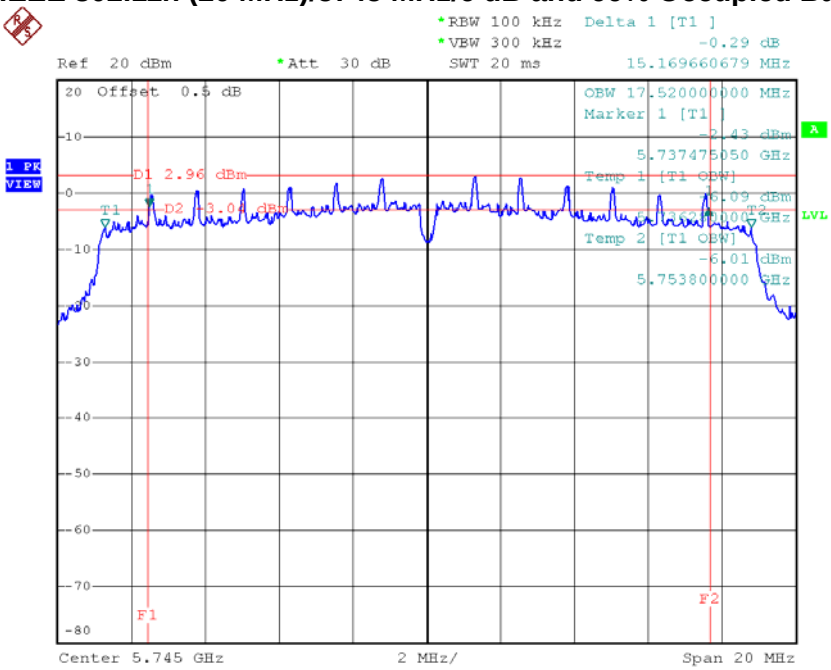


Date: 17.APR.2014 15:28:08

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/5745 MHz, 5785 MHz, 5825 MHz		

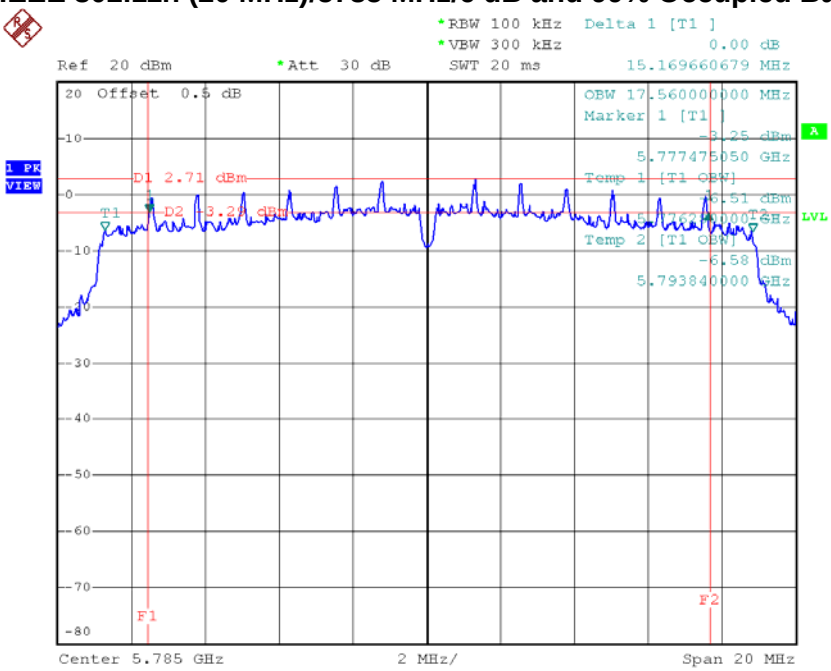
Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
5745 MHz	15.17	17.52	>=500 kHz	PASS
5785 MHz	15.17	17.56	>=500 kHz	PASS
5825 MHz	15.05	17.56	>=500 kHz	PASS

IEEE 802.11n (20 MHz)/5745 MHz/6 dB and 99% Occupied Bandwidth



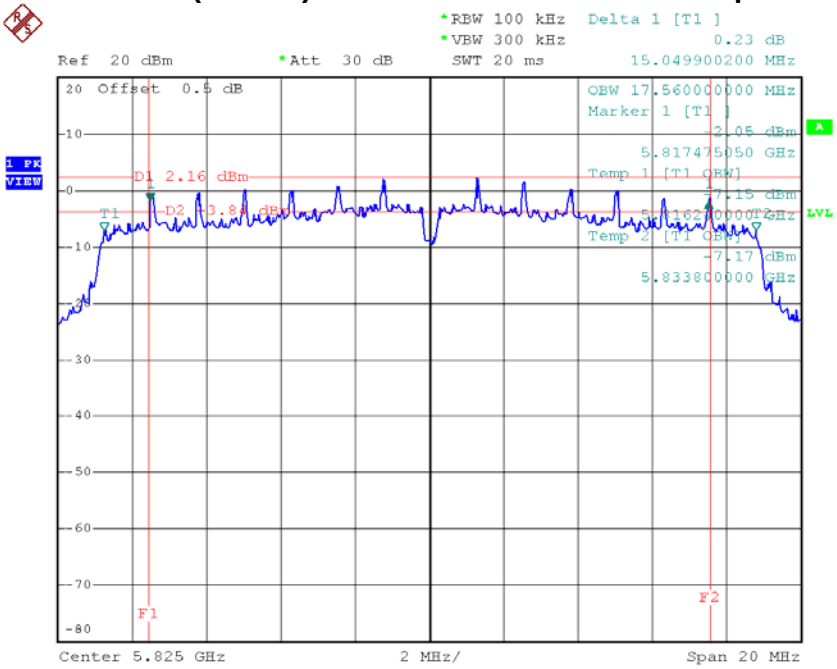
Date: 17.APR.2014 16:00:38

IEEE 802.11n (20 MHz)/5785 MHz/6 dB and 99% Occupied Bandwidth



Date: 17.APR.2014 16:05:53

IEEE 802.11n (20 MHz)/5825 MHz/6 dB and 99% Occupied Bandwidth



Date: 17.APR.2014 16:10:18

7 MAXIMUM PEAK CONDUCTED OUTPUT POWER

7.1 LIMIT

Test Item	Frequency Range (MHz)	Limit
Maximum Peak Conducted Output Power	2400-2483.5	1 watt or 30 dBm

7.2 MEASUREMENT INSTRUMENTS LIST

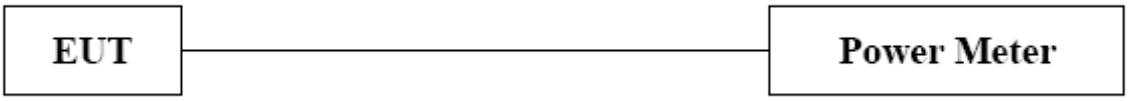
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2495A	1128008	Aug. 15, 2014
2	Power Meter Sensor	Anritsu	MA2411B	1126001	Aug. 15, 2014
3	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014

NOTE: **N/A: denotes no modelname, no serial No. or no calibration specified.**

7.3 TEST PROCEDURES

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.

7.4 TEST SETUP LAYOUT



7.5 DEVIATION FROM TEST STANDARD

No deviation

7.6 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 5.6 Unless otherwise a special operating condition is specified in the follows during the testing.

7.7 TEST RESULTS - 2412-2462 MHZ

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	Peak Output Power		Limit		Result
	(dBm)	(W)	(dBm)	(W)	
2412 MHz	12.93	0.0196	30	1	PASS
2437 MHz	14.03	0.0253	30	1	PASS
2462 MHz	14.94	0.0312	30	1	PASS

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	Peak Output Power		Limit		Result
	(dBm)	(W)	(dBm)	(W)	
2412 MHz	18.22	0.0664	30	1	PASS
2437 MHz	18.47	0.0703	30	1	PASS
2462 MHz	20.83	0.1211	30	1	PASS

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	Peak Output Power		Limit		Result
	(dBm)	(W)	(dBm)	(W)	
2412 MHz	18.88	0.0773	30	1	PASS
2437 MHz	18.62	0.0728	30	1	PASS
2462 MHz	20.26	0.1062	30	1	PASS

7.8 TEST RESULTS - 5745-5825 MHZ

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5745 MHz, 5785 MHz, 5825 MHz		

Frequency	Peak Output Power		Limit		Result
	(dBm)	(W)	(dBm)	(W)	
5745 MHz	16.61	0.0458	30	1	PASS
5785 MHz	16.16	0.0413	30	1	PASS
5825 MHz	16.03	0.0401	30	1	PASS

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/5745 MHz, 5785 MHz, 5825 MHz		

Frequency	Peak Output Power		Limit		Result
	(dBm)	(W)	(dBm)	(W)	
5745 MHz	16.54	0.0451	30	1	PASS
5785 MHz	16.13	0.0410	30	1	PASS
5825 MHz	16.03	0.0401	30	1	PASS

8 RADIATED SPURIOUS EMISSION (9 KHZ TO 1 GHZ)

8.1 LIMIT

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

Frequency Range: 9 kHz to 1 GHz		
FREQUENCY (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Frequency Range: above 1 GHz				
FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
above 1 GHz	80	60	74	54

NOTE:

1. The limit for radiated test was performed according to FCC PART 15B.
2. The tighter limit applies at the band edges.
3. Emission level (dBuV/m)=20log Emission level (uV/m).
4. The test result calculated as following:
   Measurement Value = Reading Level + Correct Factor
   Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain(if use)
   Margin Level = Measurement Value – Limit Value

8.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014
2	Horn Antenna	Schwarzbeck	BBHA 9120	D-325	Apr. 14, 2015
3	Microwave Pre_amplifier	Agilent	8449B	3008A01714	Apr. 15, 2015
4	Microflex Cable	Harbour industries	27478LL142	1m	May. 13, 2014
5	Microflex Cable	EMC	S104-SMA	8m	May. 13, 2014
6	Microflex Cable	Harbour industries	27478LL142	3m	May. 13, 2014
7	Test Cable	LMR	LMR-400	12m	May. 14, 2014
8	Test Cable	LMR	LMR-400	3m	May. 14, 2014
9	Pre-Amplifier	Anritsu	MH648A	M92649	Jun. 18, 2014
10	Log-Bicon Antenna	Schwarzbeck	VULB9168-352	9168-352	Jun. 11, 2014

Remark: N/A: denotes no modelname, no serial No. or no calibration specified.

8.3 MEASURING INSTRUMENTS SETTING

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

8.4 TEST PROCEDURES

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1 GHz. For frequencies above 1 GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m Semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.
g. The testing follows the guidelines in ANSI C63.4 and FCC Public Notice DA 00-705 Measurement Guidelines. In case the emission is fail due to the used RBW/VBW is too wide, marker-delta method of FCC Public Notice DA 00-705 will be followed.

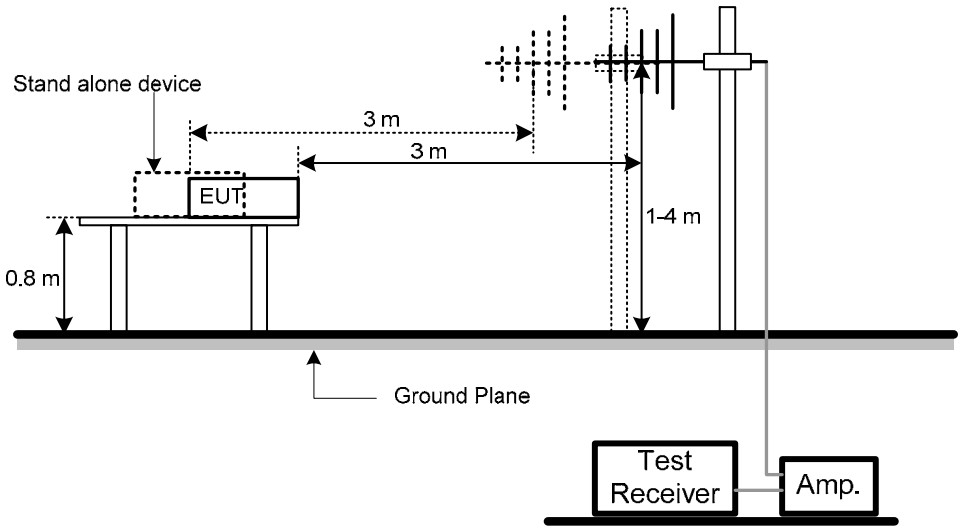
NOTE:

a. Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode with Detector BW=120 kHz; SPA setting in RBW=100 kHz, VBW =100 kHz, Swp. Time = 0.3 sec./ MHz.
b. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn‘t perform.

8.5 DEVIATION FROM TEST STANDARD

No deviation

8.6 TEST SETUP LAYOUT



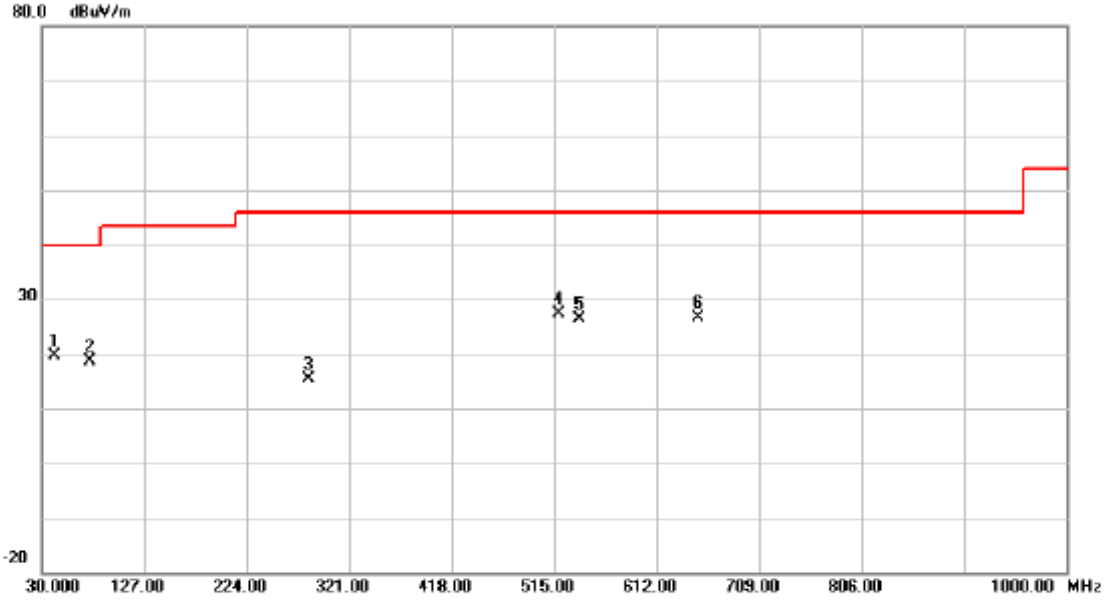
8.7 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 5.6 Unless otherwise a special operating condition is specified in the follows during the testing.

8.8 TEST RESULTS

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

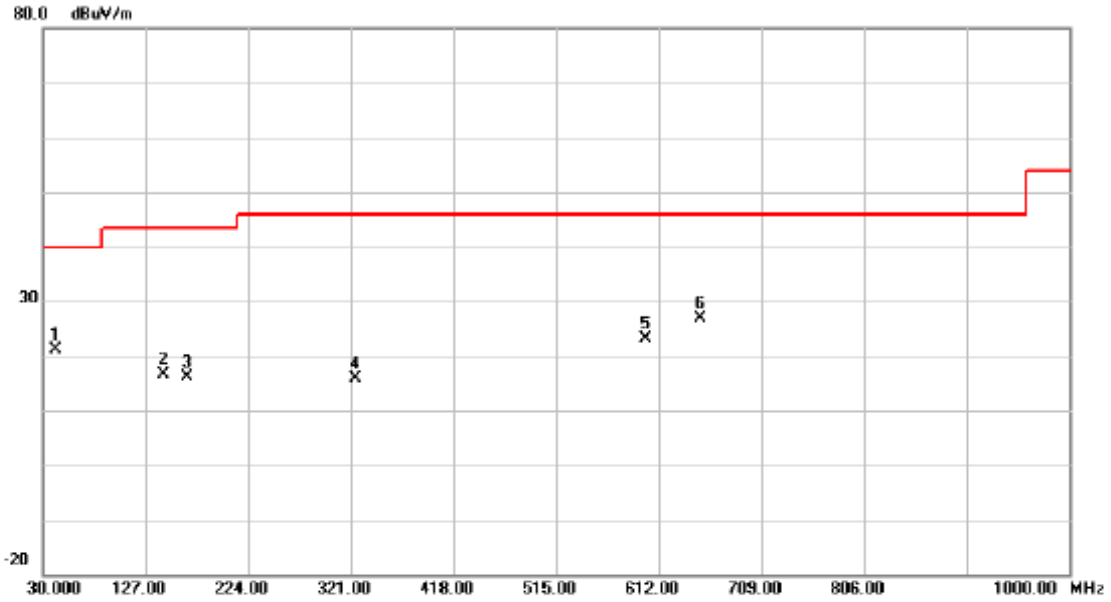
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		42.1250	33.92	-14.24	19.68	40.00	-20.32	peak	
2		76.0750	36.38	-17.75	18.63	40.00	-21.37	peak	
3		282.2000	29.62	-14.31	15.31	46.00	-30.69	peak	
4	*	519.8500	36.25	-8.99	27.26	46.00	-18.74	peak	
5		539.2500	34.92	-8.49	26.43	46.00	-19.57	peak	
6		650.8000	33.40	-6.88	26.52	46.00	-19.48	peak	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	42.1250	35.26	-14.24	21.02	40.00	-18.98	peak	
2		143.9750	31.07	-14.43	16.64	43.50	-26.86	peak	
3		165.8000	30.67	-14.44	16.23	43.50	-27.27	peak	
4		325.8500	28.79	-12.97	15.82	46.00	-30.18	peak	
5		599.8750	29.97	-6.76	23.21	46.00	-22.79	peak	
6		650.8000	33.74	-6.88	26.86	46.00	-19.14	peak	

9 RADIATED SPURIOUS EMISSION (ABOVE 1 GHZ)

9.1 LIMIT

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

Frequency Range: 9 kHz to 1 GHz		
FREQUENCY (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Frequency Range: above 1 GHz				
FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
above 1 GHz	80	60	74	54

NOTE:

(1) The limit for radiated test was performed according to FCC PART 15B.
(2) The tighter limit applies at the band edges.
(3) Emission level (dBuV/m)=20log Emission level (uV/m).
(4) The test result calculated as following:
Measurement Value = Reading Level + Correct Factor
Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain(if use)
Margin Level = Measurement Value – Limit Value

9.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014
2	Horn Antenna	Schwarzbeck	BBHA 9120	D-325	Apr. 14, 2015
3	Microwave Pre_amplifier	Agilent	8449B	3008A01714	Apr. 15, 2015
4	Microflex Cable	Harbour industries	27478LL142	1m	May. 13, 2014
5	Microflex Cable	EMC	S104-SMA	8m	May. 13, 2014
6	Microflex Cable	Harbour industries	27478LL142	3m	May. 13, 2014
7	Test Cable	LMR	LMR-400	12m	May. 14, 2014
8	Test Cable	LMR	LMR-400	3m	May. 14, 2014
9	Pre-Amplifier	Anritsu	MH648A	M92649	Jun. 18, 2014
10	Log-Bicon Antenna	Schwarzbeck	VULB9168-352	9168-352	Jun. 11, 2014

Remark: N/A: denotes no modelname, no serial No. or no calibration specified.

9.3 MEASURING INSTRUMENTS SETTING

Spectrum Analyzer	Parameter Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average
RB / VB (other emission)	1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average

9.4 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m Semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
c. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
d. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.
f. The testing follows the guidelines in ANSI C63.4 and FCC Public Notice DA 00-705 Measurement Guidelines. In case the emission is fail due to the used RBW/VBW is too wide, marker-delta method of FCC Public Notice DA 00-705 will be followed.

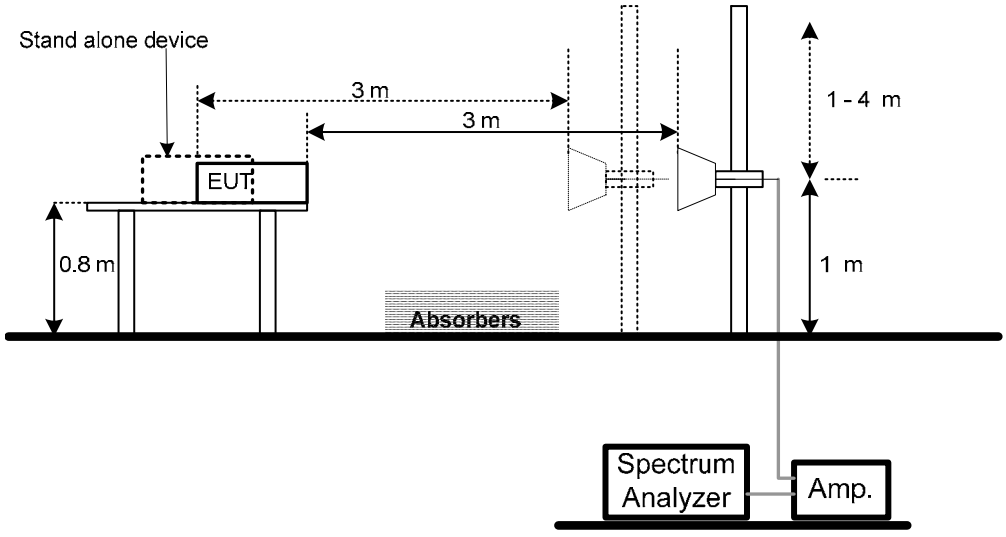
NOTE:

a. Reading in which marked as Peak means measurements by using are Peak Mode with instrument setting in RBW= 1 MHz, VBW= 1 MHz, Swp. Time = Auto.
Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW= 1 MHz, VBW= 10 Hz, Swp. Time = Auto.
b. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform.

9.5 DEVIATION FROM TEST STANDARD

No deviation

9.6 TEST SETUP LAYOUT



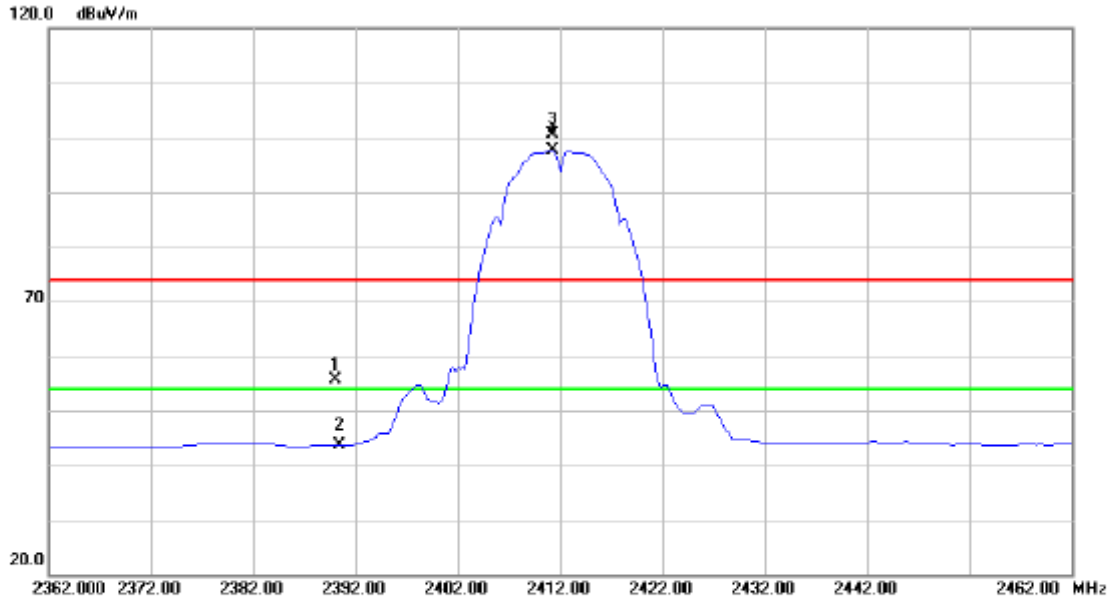
9.7 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 5.6 Unless otherwise a special operating condition is specified in the follows during the testing.

9.8 TEST RESULTS - 2412-2462 MHZ

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz		

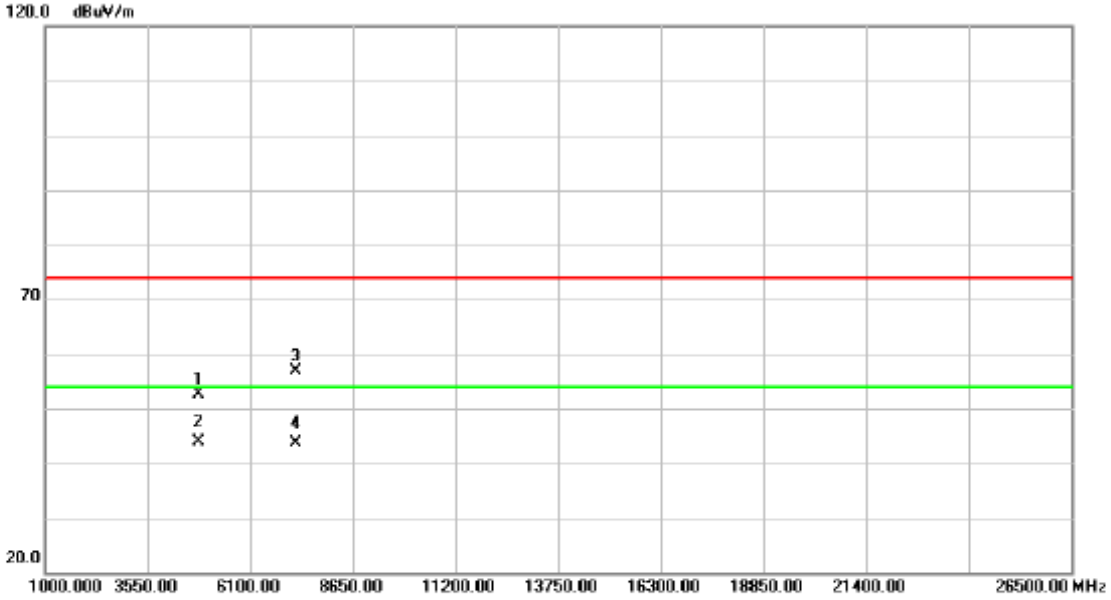
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	23.75	31.81	55.56	74.00	-18.44	peak	
2		2390.000	11.76	31.81	43.57	54.00	-10.43	AVG	
3	X	2411.250	68.65	31.89	100.54	74.00	26.54	peak	
4	*	2411.250	65.70	31.89	97.59	54.00	43.59	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz		

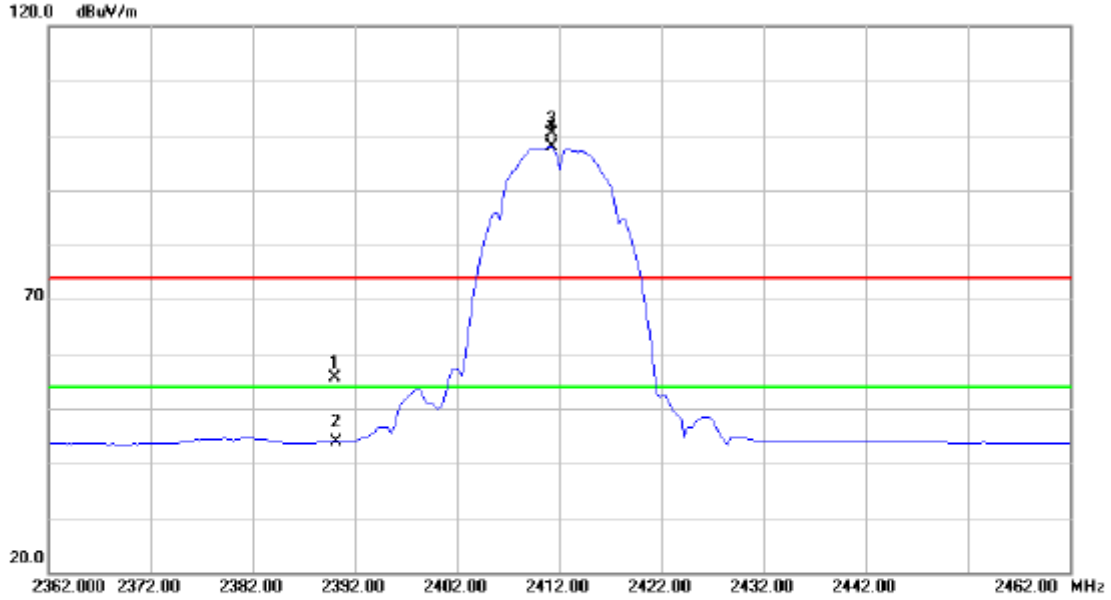
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4823.960	46.48	6.21	52.69	74.00	-21.31	peak	
2	*	4823.960	37.74	6.21	43.95	54.00	-10.05	AVG	
3		7235.345	44.28	12.48	56.76	74.00	-17.24	peak	
4		7235.345	31.16	12.48	43.64	54.00	-10.36	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz		

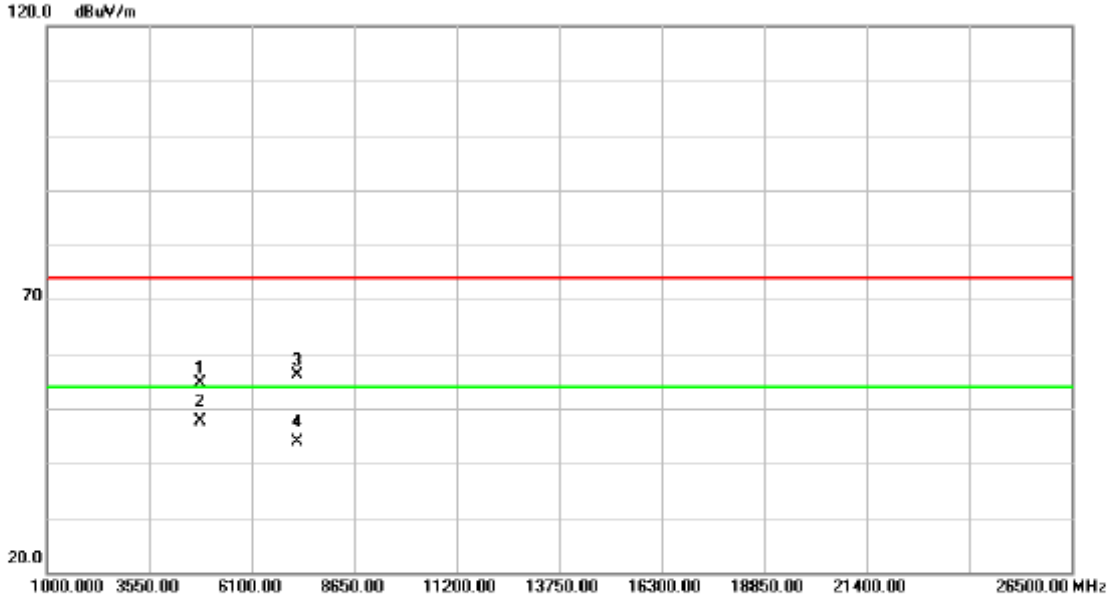
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	23.85	31.81	55.66	74.00	-18.34	peak	
2		2390.000	12.12	31.81	43.93	54.00	-10.07	AVG	
3	X	2411.250	68.47	31.89	100.36	74.00	26.36	peak	
4	*	2411.250	66.05	31.89	97.94	54.00	43.94	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz		

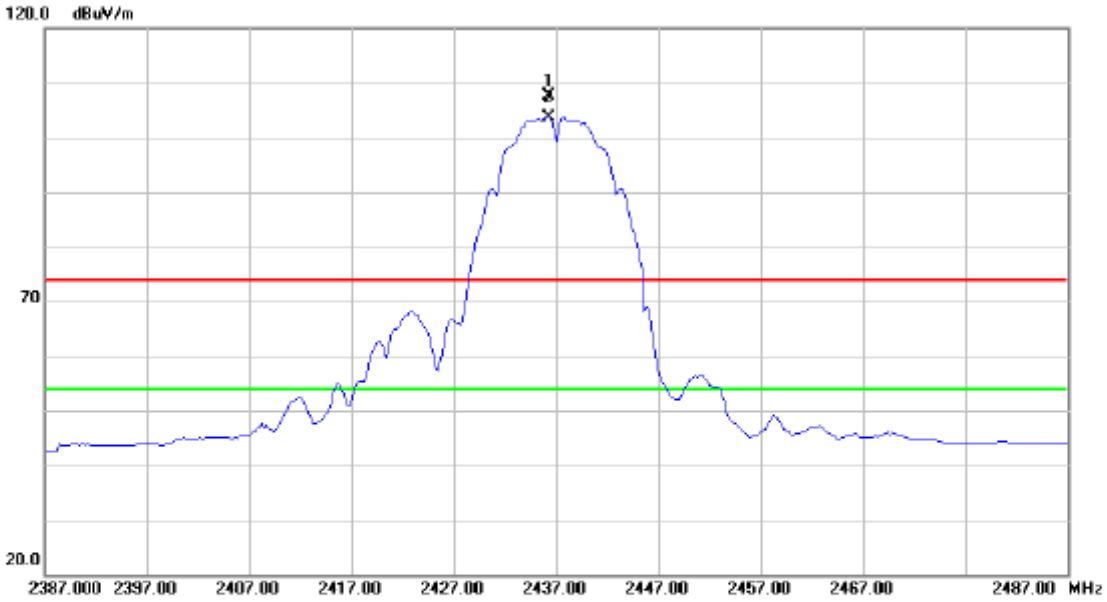
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4823.870	48.54	6.21	54.75	74.00	-19.25	peak	
2	*	4823.870	41.35	6.21	47.56	54.00	-6.44	AVG	
3		7236.340	43.73	12.50	56.23	74.00	-17.77	peak	
4		7236.340	31.37	12.50	43.87	54.00	-10.13	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

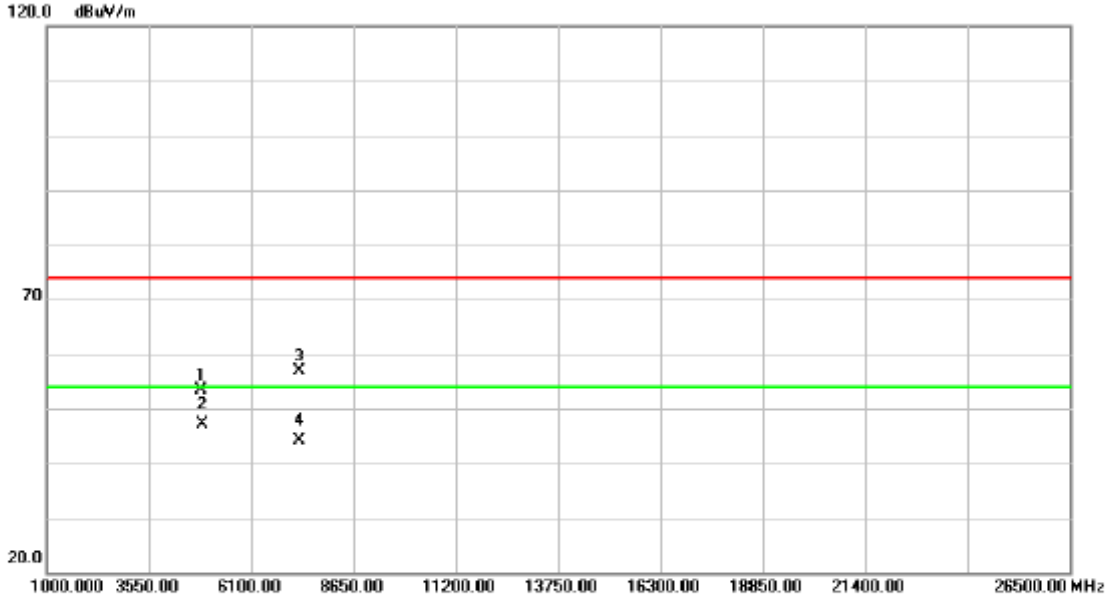
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2436.200	75.61	32.00	107.61	74.00	33.61	peak	
2	*	2436.200	71.75	32.00	103.75	54.00	49.75	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

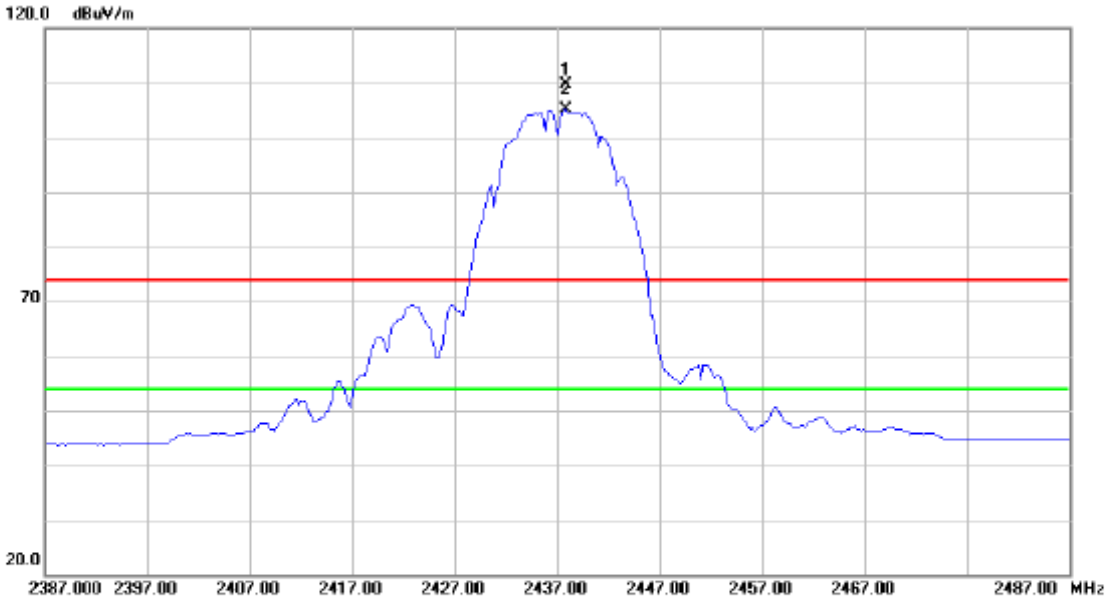
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4873.965	47.10	6.28	53.38	74.00	-20.62	peak	
2	*	4873.965	40.87	6.28	47.15	54.00	-6.85	AVG	
3		7311.055	44.00	12.77	56.77	74.00	-17.23	peak	
4		7311.055	31.38	12.77	44.15	54.00	-9.85	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

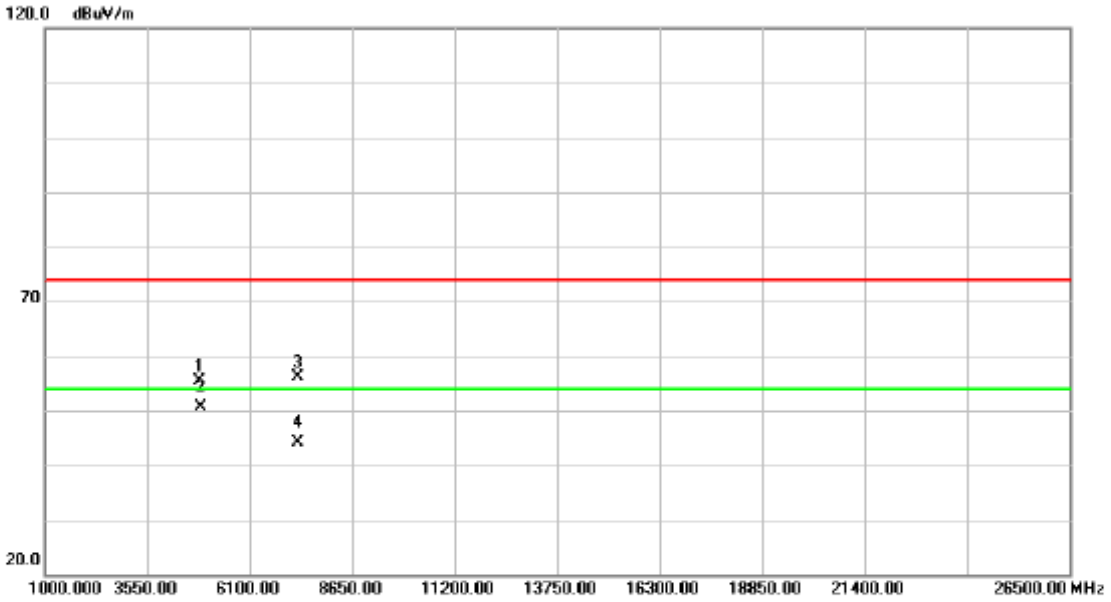
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2437.800	77.51	32.00	109.51	74.00	35.51	peak	
2	*	2437.800	73.05	32.00	105.05	54.00	51.05	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

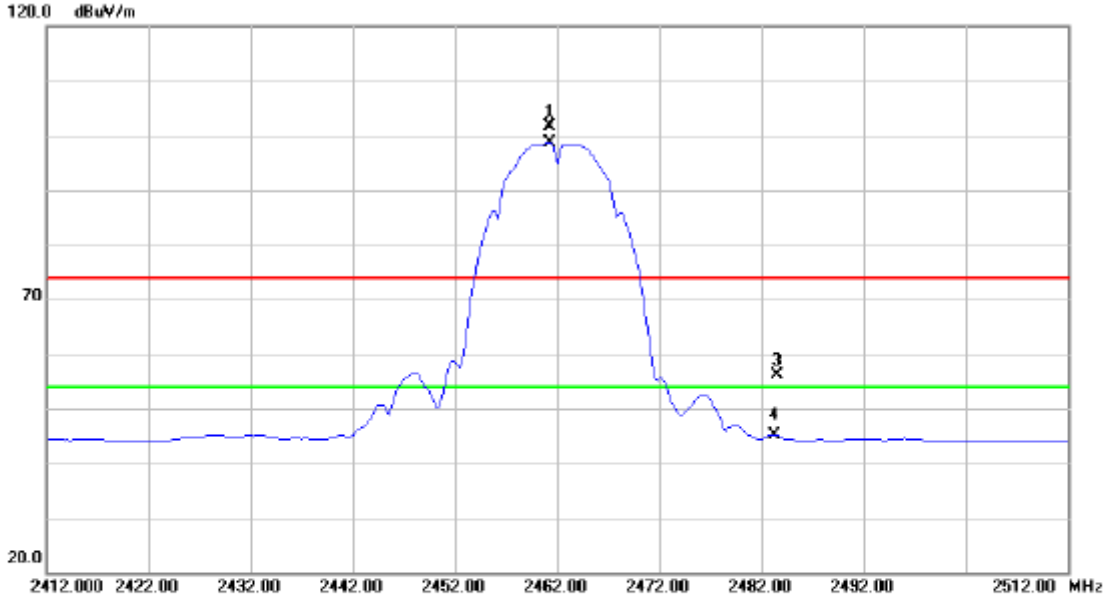
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4873.915	49.12	6.28	55.40	74.00	-18.60	peak	
2	*	4873.915	44.26	6.28	50.54	54.00	-3.46	AVG	
3		7311.100	43.30	12.77	56.07	74.00	-17.93	peak	
4		7311.100	31.35	12.77	44.12	54.00	-9.88	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2462 MHz		

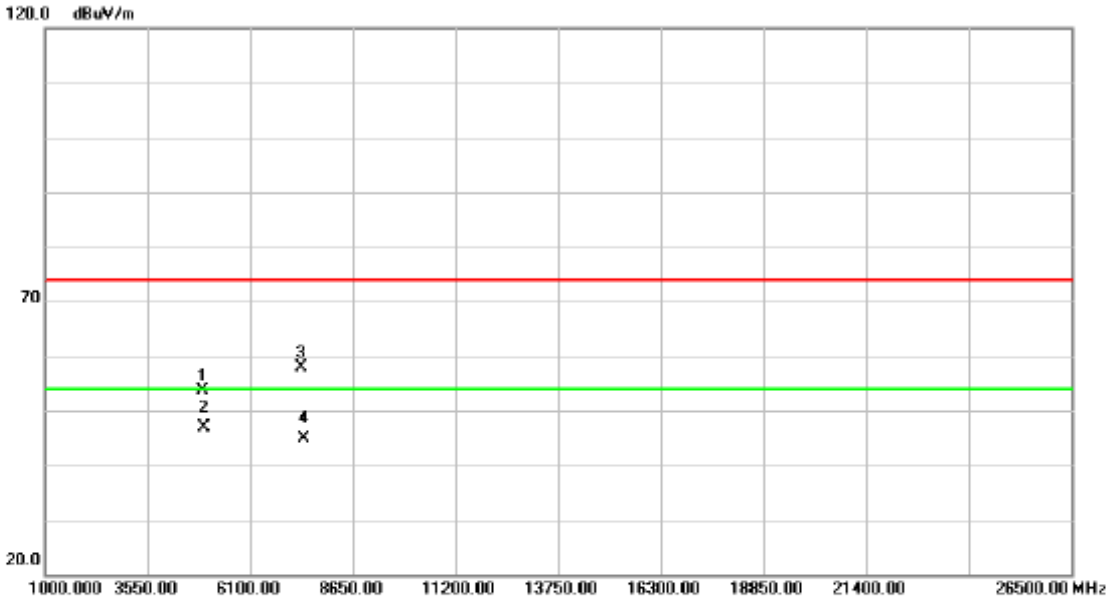
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2461.250	69.58	32.10	101.68	74.00	27.68	peak	
2	*	2461.250	66.51	32.10	98.61	54.00	44.61	AVG	
3		2483.500	23.99	32.19	56.18	74.00	-17.82	peak	
4		2483.500	12.90	32.19	45.09	54.00	-8.91	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2462 MHz		

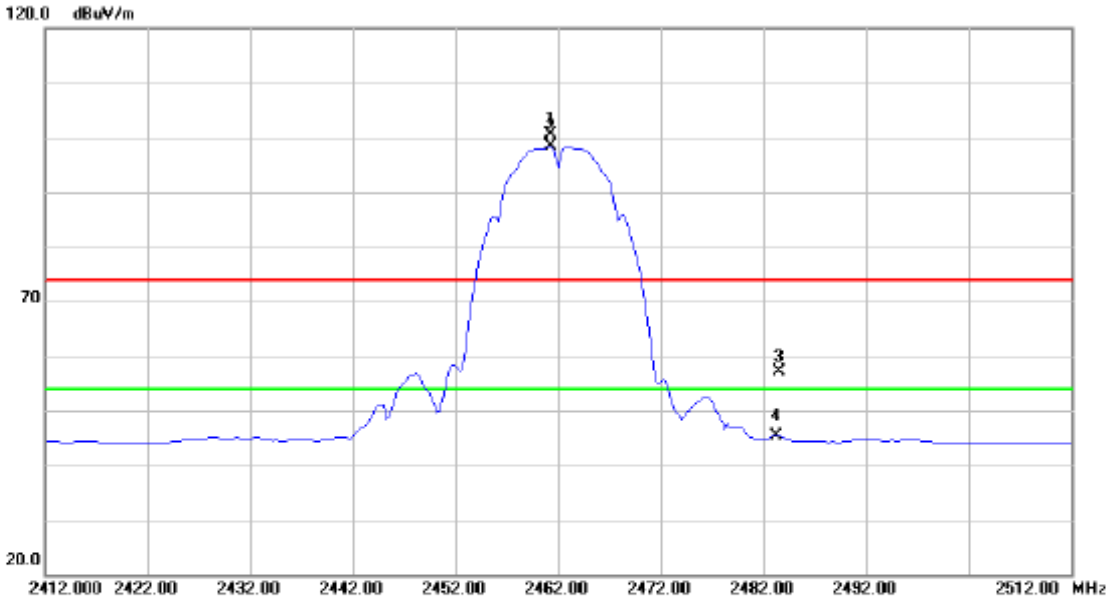
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4923.985	47.35	6.34	53.69	74.00	-20.31	peak	
2	*	4923.985	40.47	6.34	46.81	54.00	-7.19	AVG	
3		7385.400	44.85	13.04	57.89	74.00	-16.11	peak	
4		7385.400	31.85	13.04	44.89	54.00	-9.11	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2462 MHz		

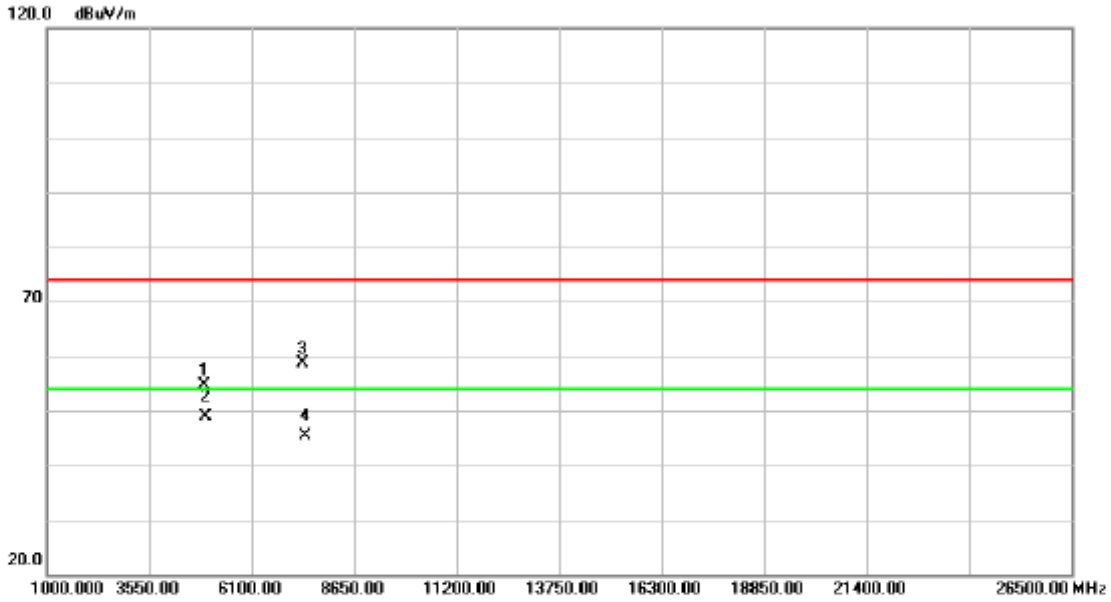
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2461.250	68.55	32.10	100.65	74.00	26.65	peak	
2	*	2461.250	66.25	32.10	98.35	54.00	44.35	AVG	
3		2483.500	24.85	32.19	57.04	74.00	-16.96	peak	
4		2483.500	13.12	32.19	45.31	54.00	-8.69	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2462 MHz		

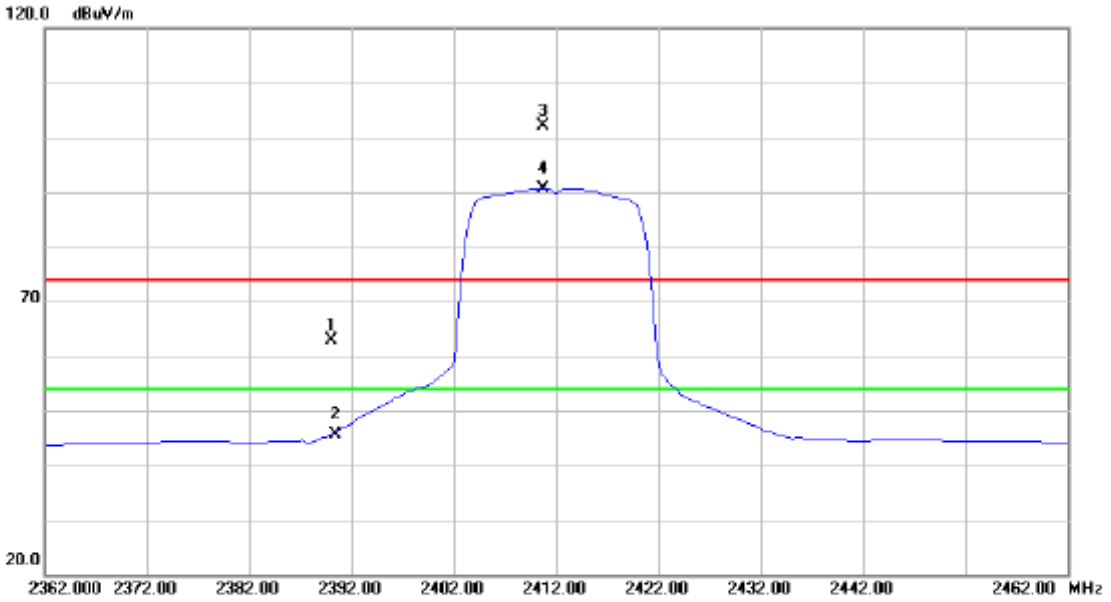
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4923.975	48.25	6.34	54.59	74.00	-19.41	peak	
2	*	4923.975	42.52	6.34	48.86	54.00	-5.14	AVG	
3		7385.550	45.54	13.05	58.59	74.00	-15.41	peak	
4		7385.550	32.29	13.05	45.34	54.00	-8.66	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz		

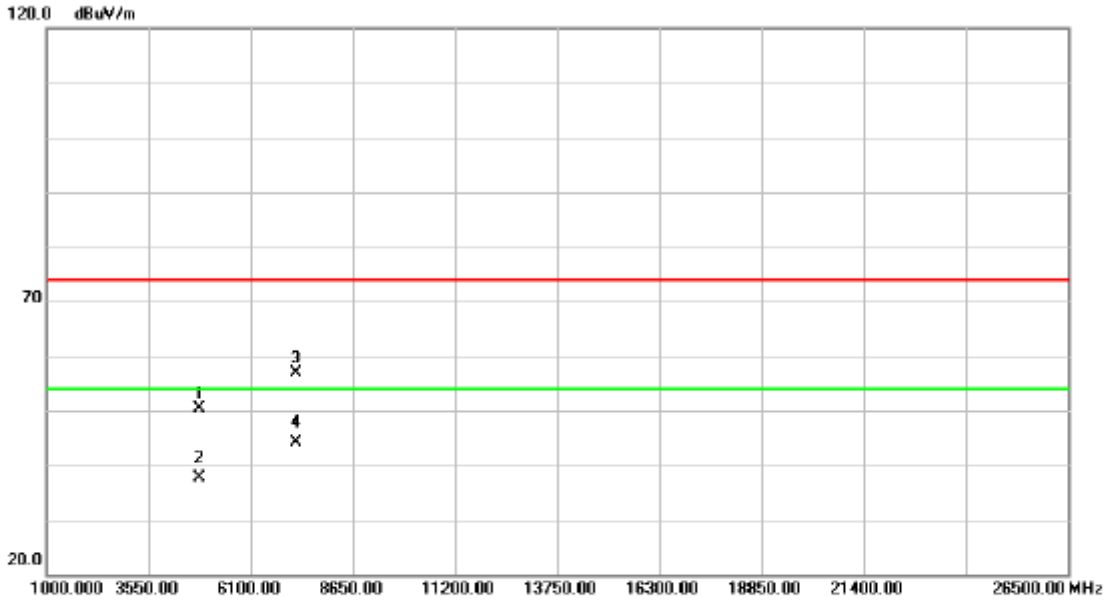
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	31.13	31.81	62.94	74.00	-11.06	peak	
2		2390.000	13.86	31.81	45.67	54.00	-8.33	AVG	
3	X	2410.750	70.36	31.89	102.25	74.00	28.25	peak	
4	*	2410.750	58.80	31.89	90.69	54.00	36.69	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz		

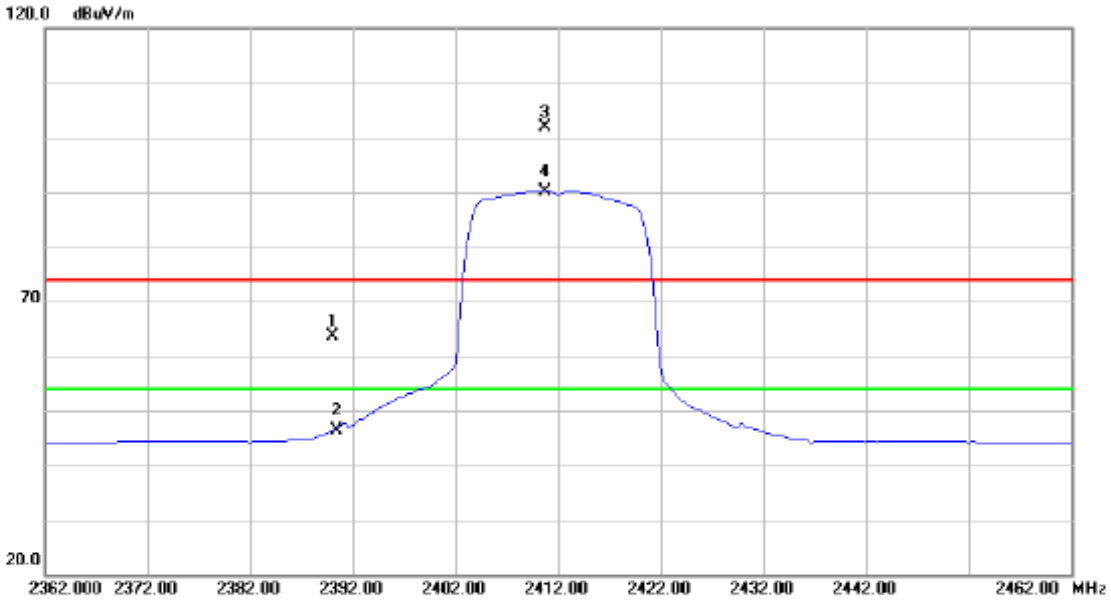
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4823.840	44.24	6.21	50.45	74.00	-23.55	peak	
2		4823.840	31.43	6.21	37.64	54.00	-16.36	AVG	
3		7235.810	44.37	12.49	56.86	74.00	-17.14	peak	
4	*	7235.810	31.74	12.49	44.23	54.00	-9.77	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz		

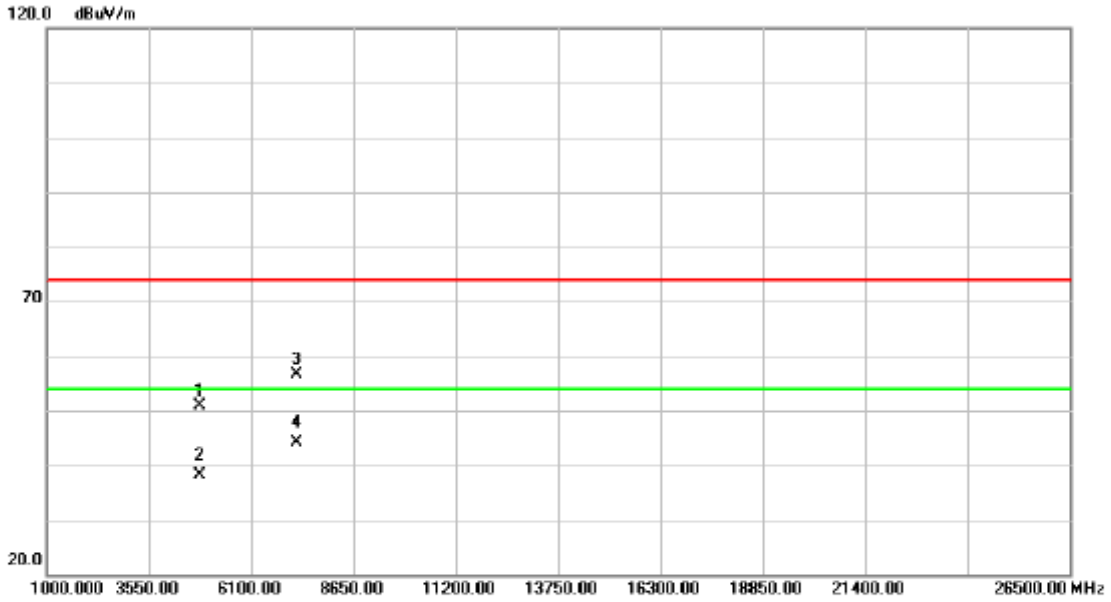
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	31.77	31.81	63.58	74.00	-10.42	peak	
2		2390.000	14.53	31.81	46.34	54.00	-7.66	AVG	
3	X	2410.750	70.00	31.89	101.89	74.00	27.89	peak	
4	*	2410.750	58.36	31.89	90.25	54.00	36.25	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz		

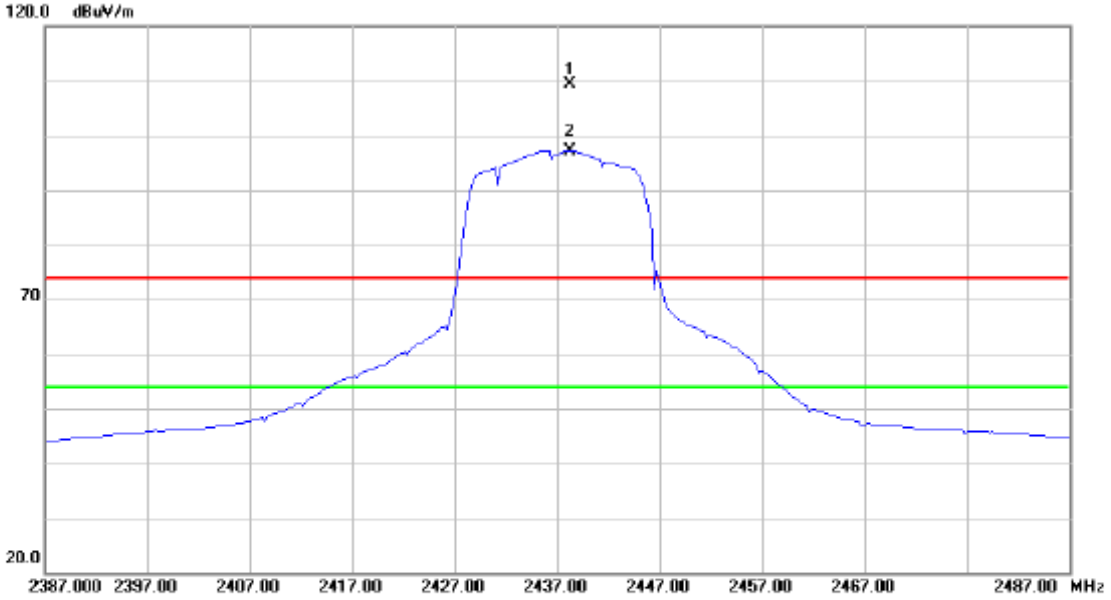
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.050	44.60	6.21	50.81	74.00	-23.19	peak	
2		4824.050	31.96	6.21	38.17	54.00	-15.83	AVG	
3		7236.185	44.24	12.50	56.74	74.00	-17.26	peak	
4	*	7236.185	31.56	12.50	44.06	54.00	-9.94	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2437 MHz		

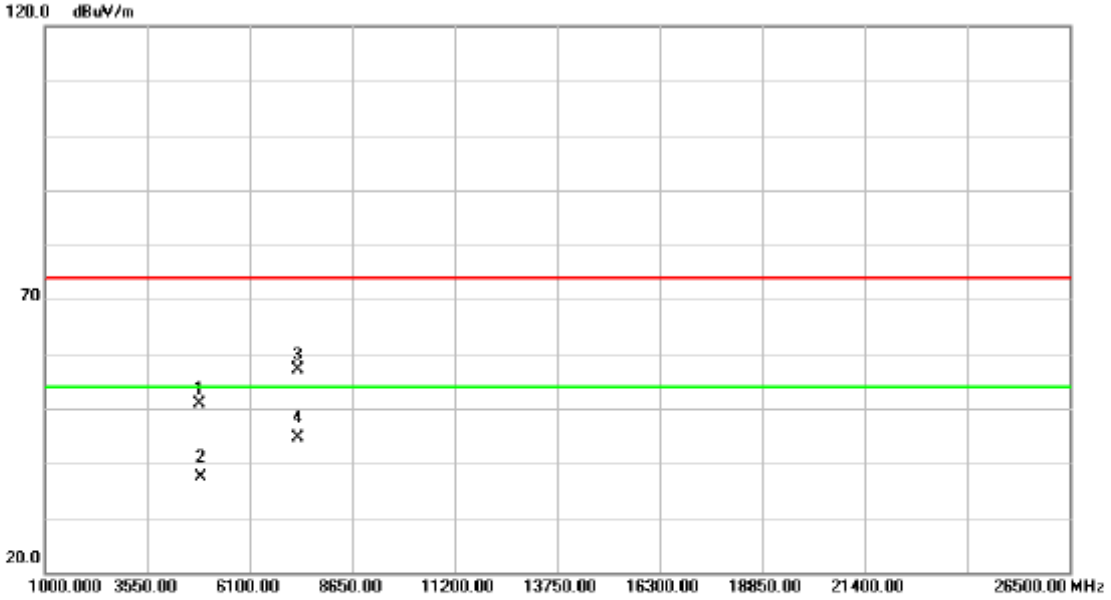
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2438.200	77.42	32.00	109.42	74.00	35.42	peak	
2	*	2438.200	65.23	32.00	97.23	54.00	43.23	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2437 MHz		

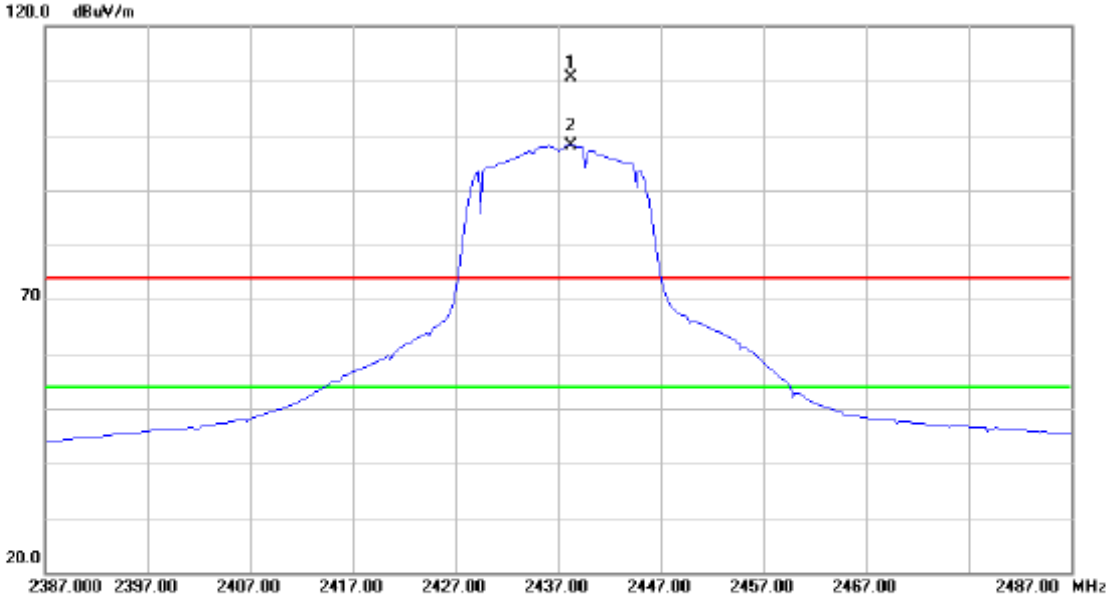
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4873.645	44.57	6.28	50.85	74.00	-23.15	peak	
2		4873.645	31.11	6.28	37.39	54.00	-16.61	AVG	
3		7310.815	44.37	12.77	57.14	74.00	-16.86	peak	
4	*	7310.815	31.76	12.77	44.53	54.00	-9.47	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2437 MHz		

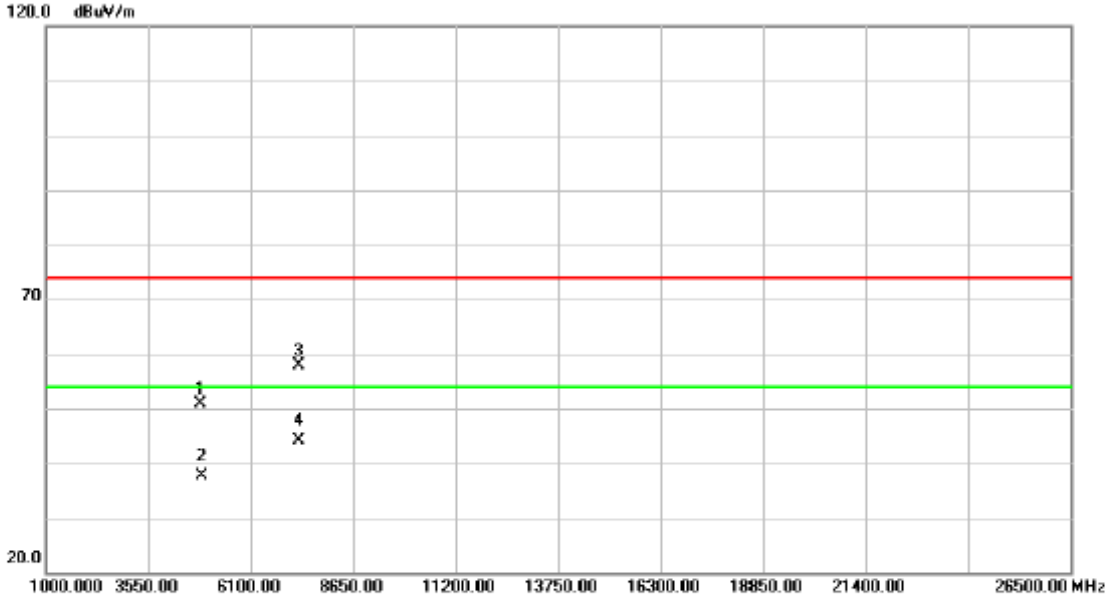
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2438.200	78.65	32.00	110.65	74.00	36.65	peak	
2	*	2438.200	66.13	32.00	98.13	54.00	44.13	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2437 MHz		

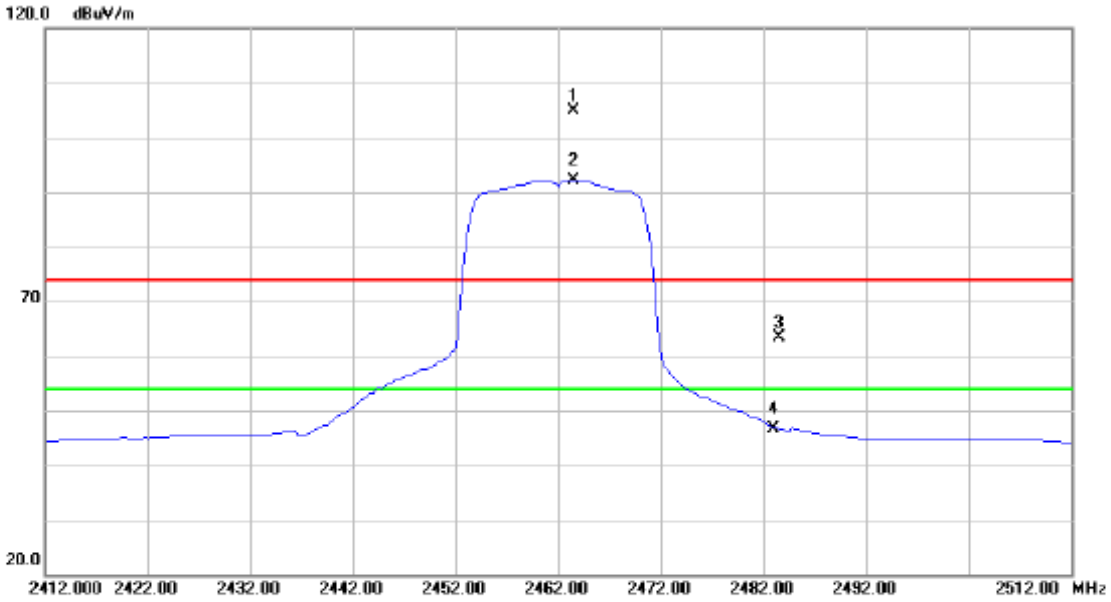
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4873.915	44.57	6.28	50.85	74.00	-23.15	peak	
2		4873.915	31.32	6.28	37.60	54.00	-16.40	AVG	
3		7311.140	45.03	12.77	57.80	74.00	-16.20	peak	
4	*	7311.140	31.47	12.77	44.24	54.00	-9.76	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2462 MHz		

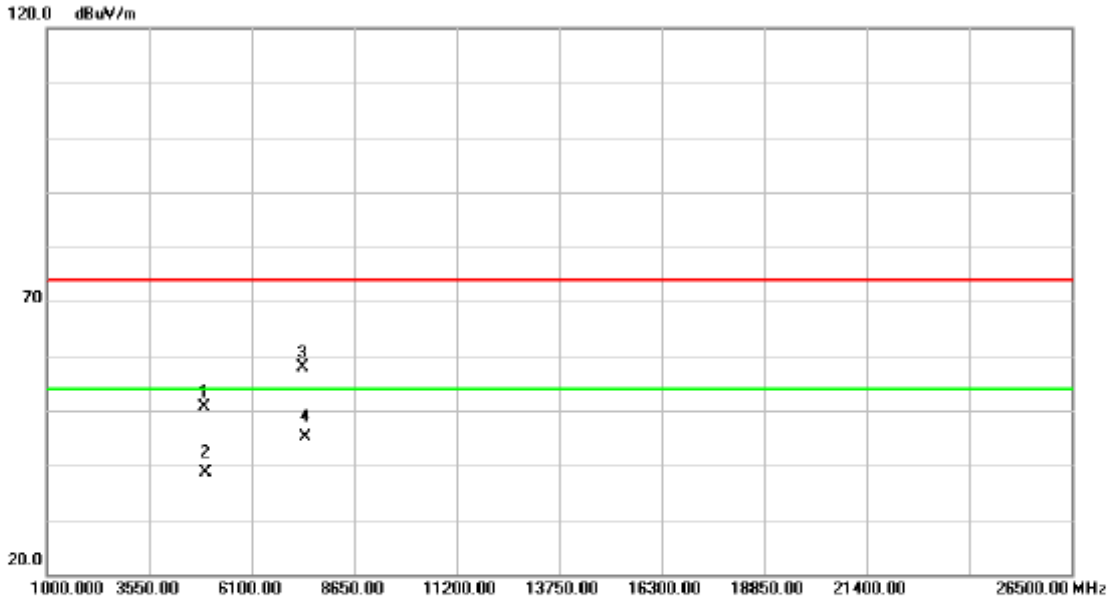
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2463.500	72.86	32.11	104.97	74.00	30.97	peak	
2	*	2463.500	60.07	32.11	92.18	54.00	38.18	AVG	
3		2483.500	31.27	32.19	63.46	74.00	-10.54	peak	
4		2483.500	14.55	32.19	46.74	54.00	-7.26	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2462 MHz		

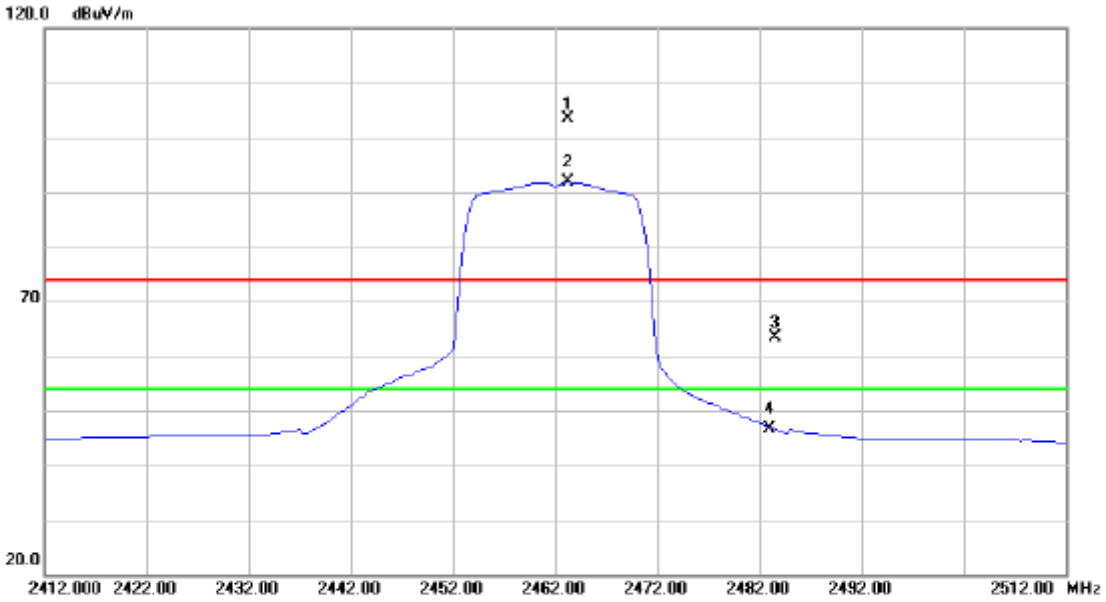
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4923.870	44.40	6.34	50.74	74.00	-23.26	peak	
2		4923.870	32.34	6.34	38.68	54.00	-15.32	AVG	
3		7386.400	44.93	13.05	57.98	74.00	-16.02	peak	
4	*	7386.400	32.04	13.05	45.09	54.00	-8.91	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2462 MHz		

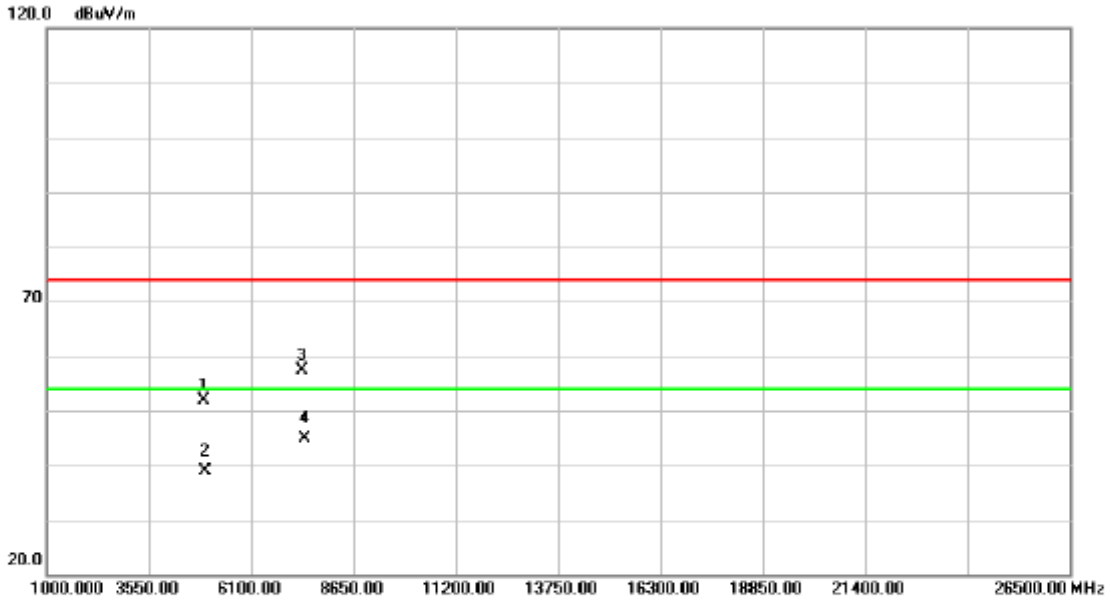
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2463.250	71.36	32.11	103.47	74.00	29.47	peak	
2	*	2463.250	59.65	32.11	91.76	54.00	37.76	AVG	
3		2483.500	31.27	32.19	63.46	74.00	-10.54	peak	
4		2483.500	14.40	32.19	46.59	54.00	-7.41	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2462 MHz		

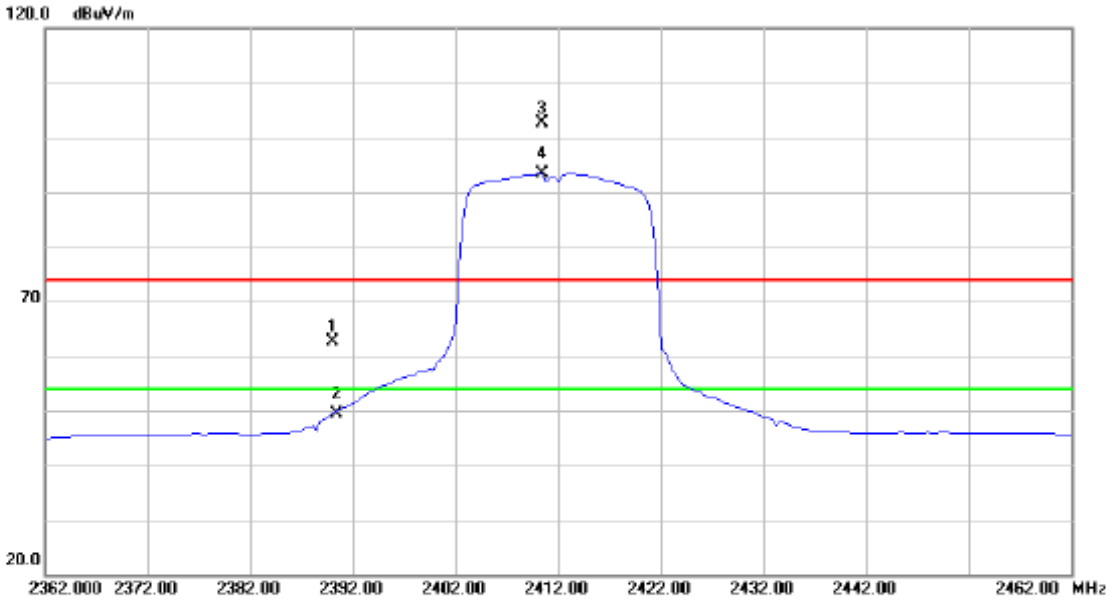
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4923.920	45.47	6.34	51.81	74.00	-22.19	peak	
2		4923.920	32.42	6.34	38.76	54.00	-15.24	AVG	
3		7385.820	44.37	13.05	57.42	74.00	-16.58	peak	
4	*	7385.820	31.74	13.05	44.79	54.00	-9.21	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz		

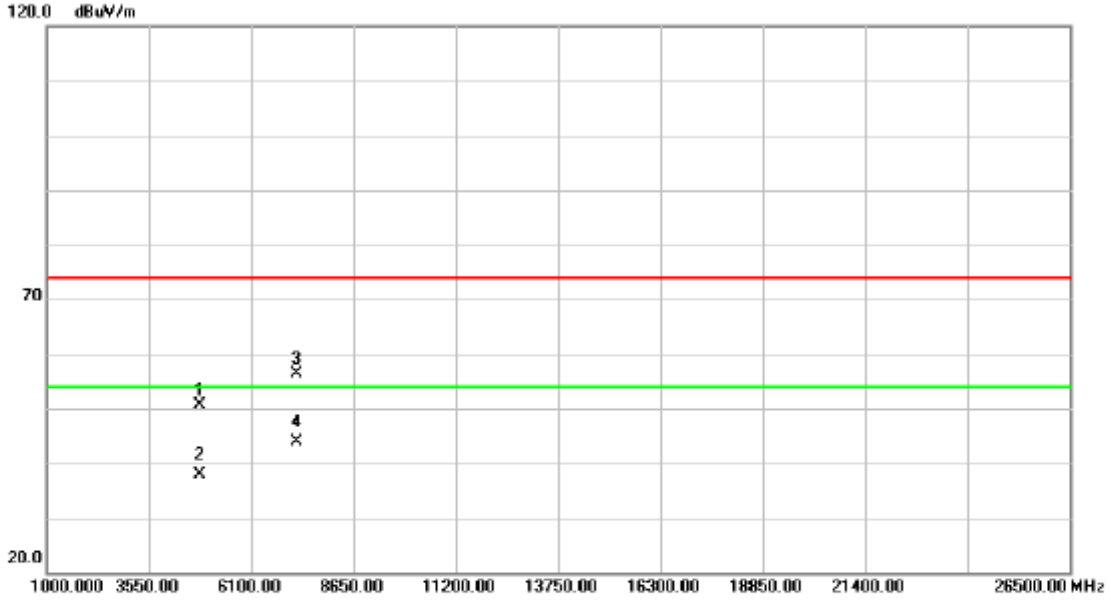
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	30.87	31.81	62.68	74.00	-11.32	peak	
2		2390.000	17.45	31.81	49.26	54.00	-4.74	AVG	
3	X	2410.500	70.64	31.89	102.53	74.00	28.53	peak	
4	*	2410.500	61.46	31.89	93.35	54.00	39.35	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz		

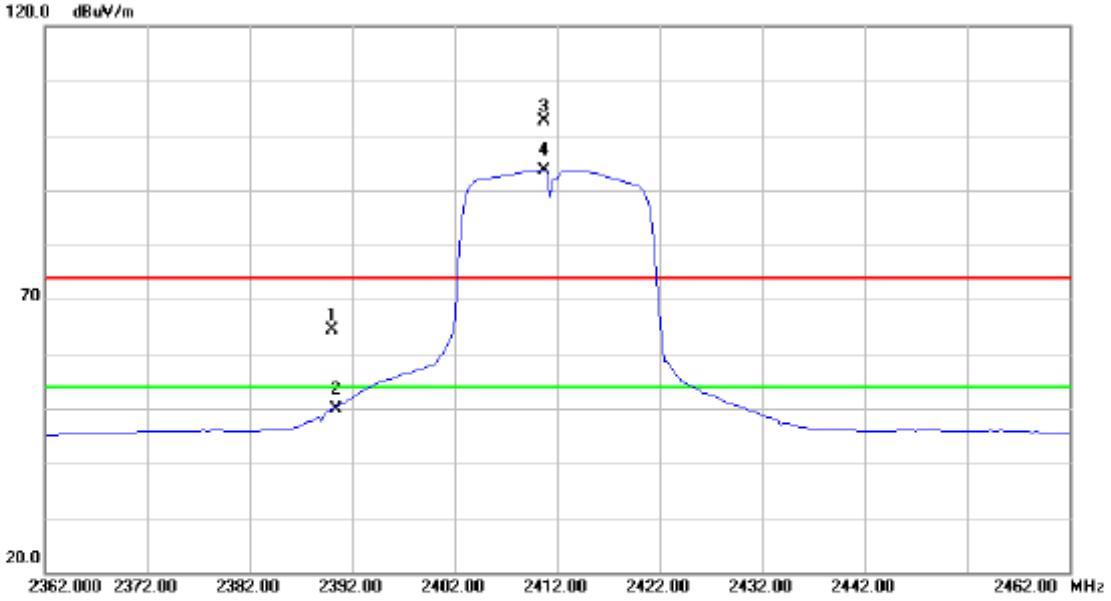
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.425	44.30	6.21	50.51	74.00	-23.49	peak	
2		4824.425	31.71	6.21	37.92	54.00	-16.08	AVG	
3		7236.060	43.81	12.49	56.30	74.00	-17.70	peak	
4	*	7236.060	31.37	12.49	43.86	54.00	-10.14	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz		

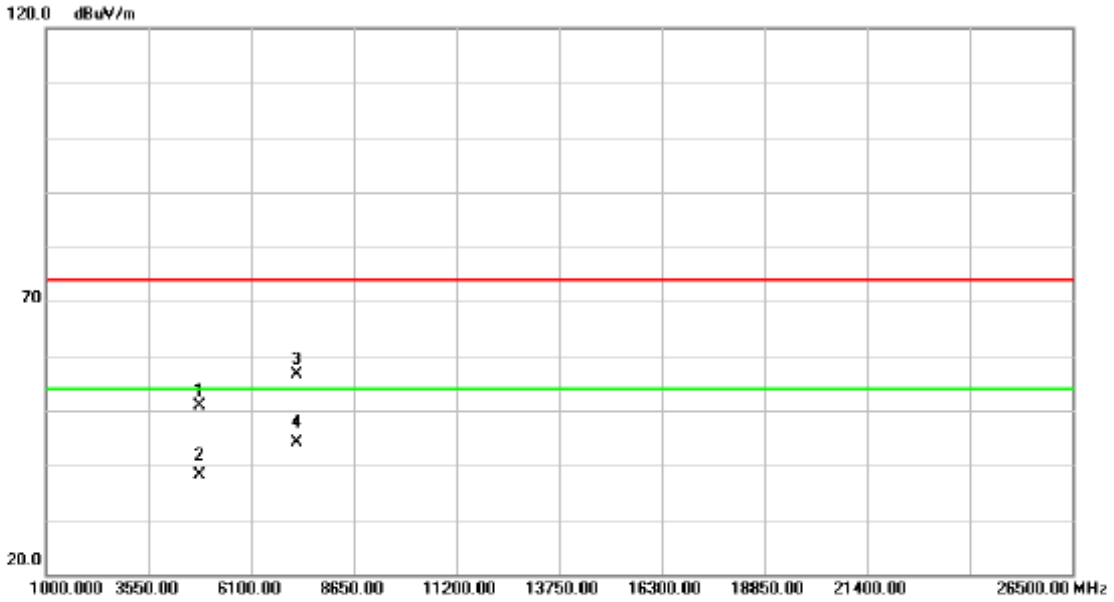
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	32.67	31.81	64.48	74.00	-9.52	peak	
2		2390.000	17.99	31.81	49.80	54.00	-4.20	AVG	
3	X	2410.750	70.71	31.89	102.60	74.00	28.60	peak	
4	*	2410.750	61.82	31.89	93.71	54.00	39.71	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz		

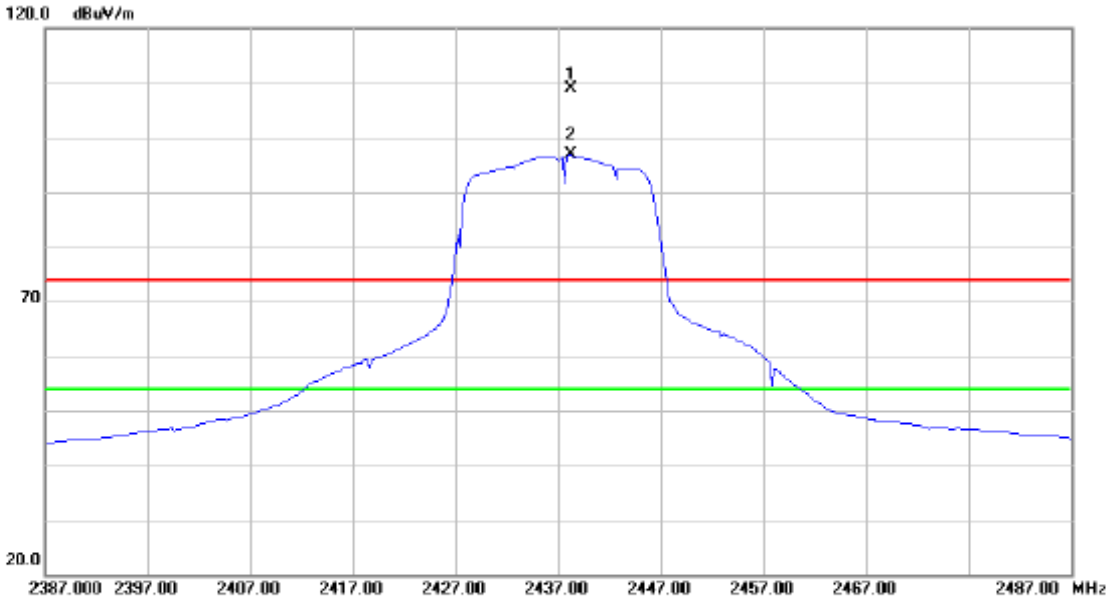
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4823.905	44.77	6.21	50.98	74.00	-23.02	peak	
2		4823.905	31.87	6.21	38.08	54.00	-15.92	AVG	
3		7235.985	44.05	12.49	56.54	74.00	-17.46	peak	
4	*	7235.985	31.62	12.49	44.11	54.00	-9.89	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz		

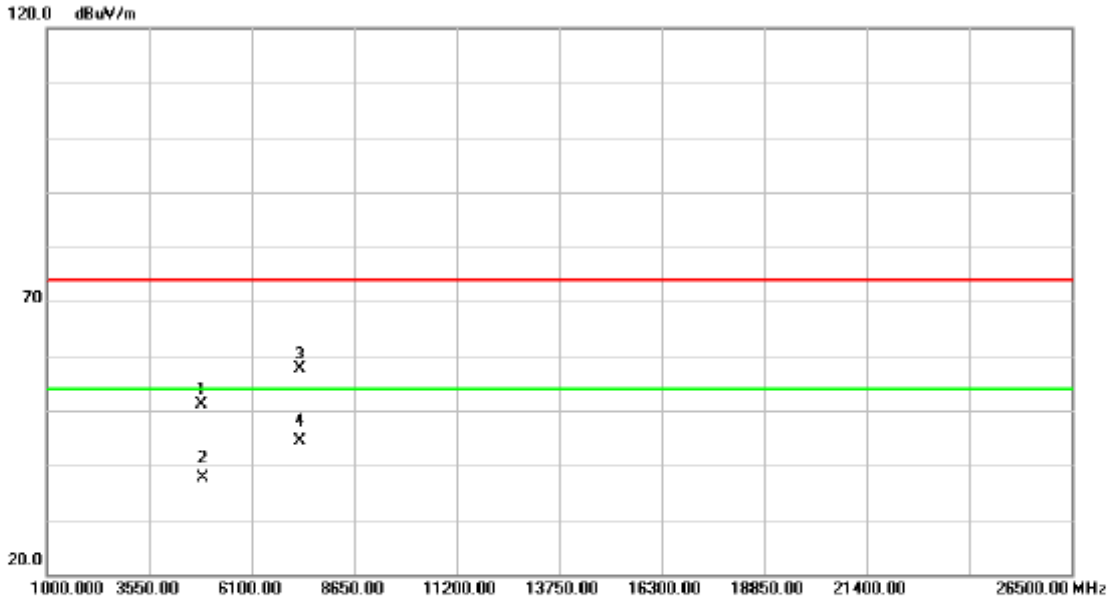
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2438.200	76.87	32.00	108.87	74.00	34.87	peak	
2	*	2438.200	64.78	32.00	96.78	54.00	42.78	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz		

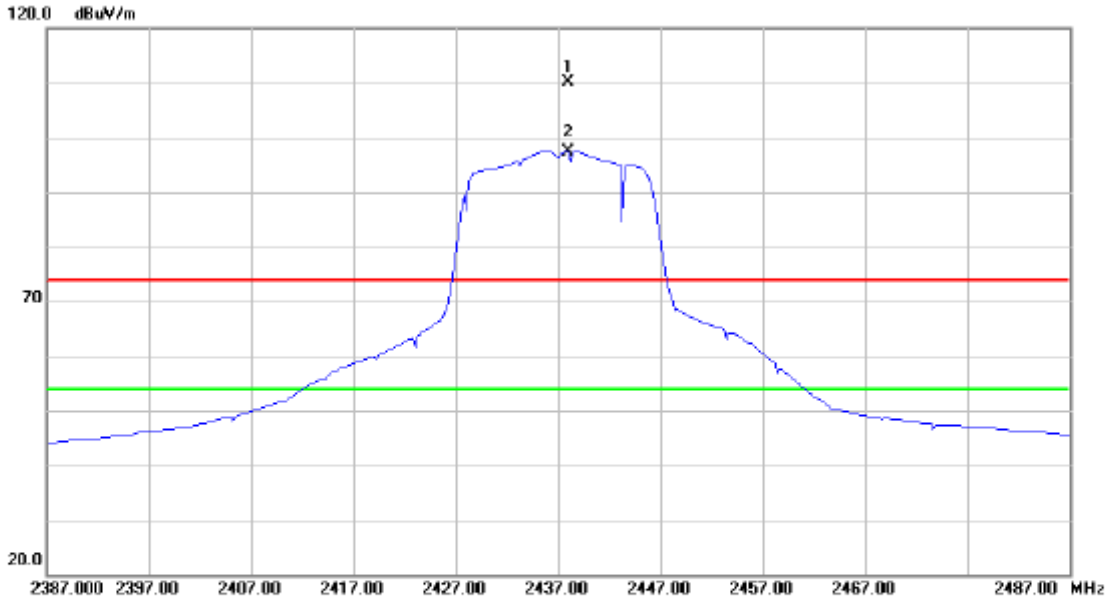
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4873.570	44.75	6.28	51.03	74.00	-22.97	peak	
2		4873.570	31.31	6.28	37.59	54.00	-16.41	AVG	
3		7311.150	44.93	12.77	57.70	74.00	-16.30	peak	
4	*	7311.150	31.72	12.77	44.49	54.00	-9.51	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz		

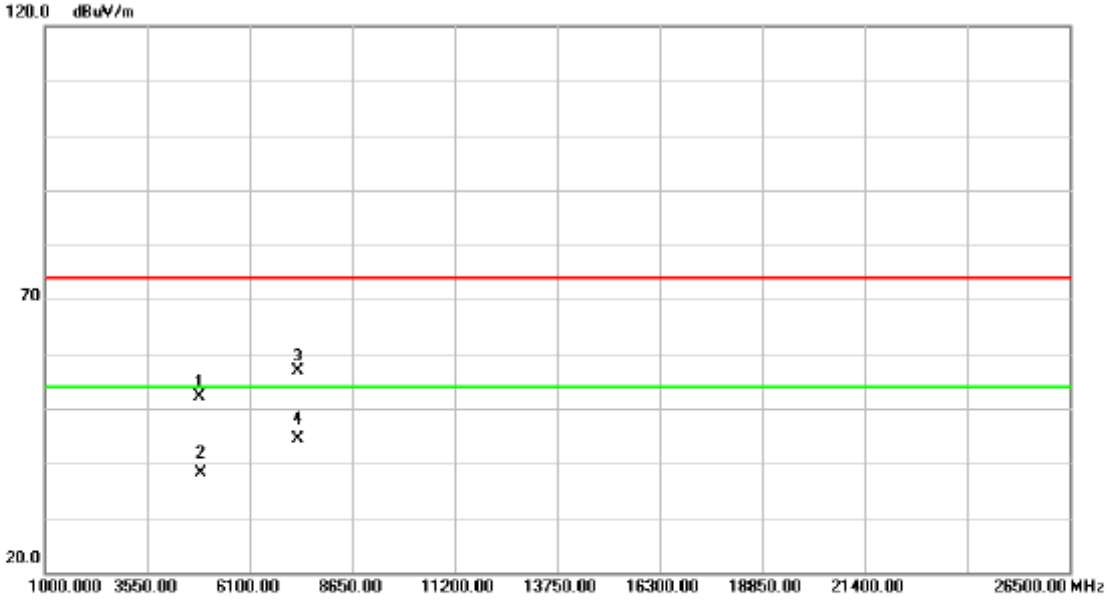
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2438.000	78.25	32.00	110.25	74.00	36.25	peak	
2	*	2438.000	65.49	32.00	97.49	54.00	43.49	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz		

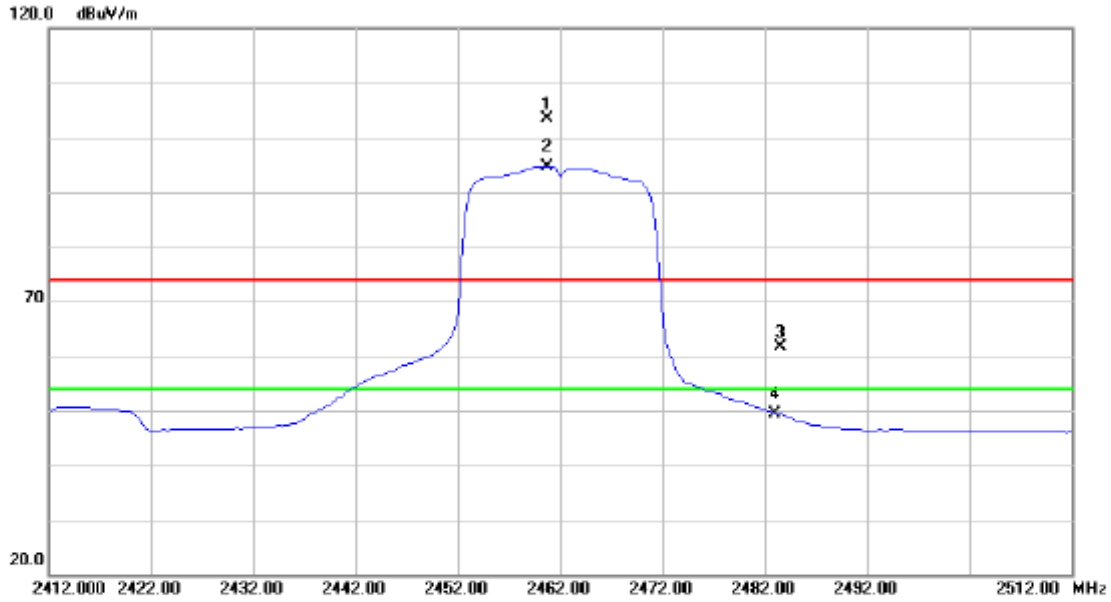
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4873.890	45.77	6.28	52.05	74.00	-21.95	peak	
2		4873.890	31.91	6.28	38.19	54.00	-15.81	AVG	
3		7310.865	44.23	12.77	57.00	74.00	-17.00	peak	
4	*	7310.865	31.71	12.77	44.48	54.00	-9.52	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz		

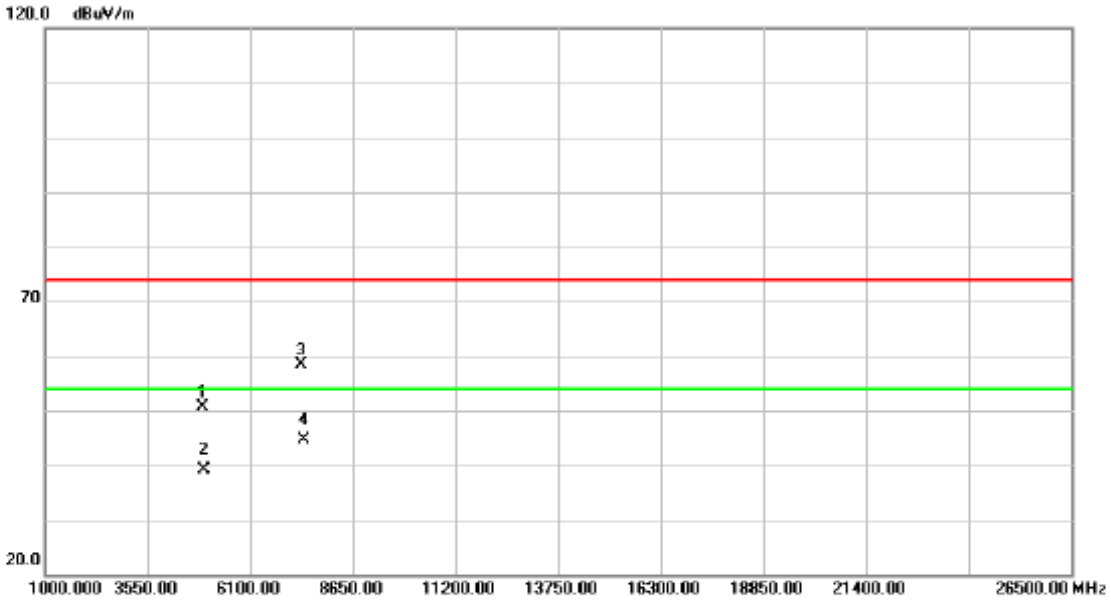
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2460.750	71.29	32.10	103.39	74.00	29.39	peak	
2	*	2460.750	62.57	32.10	94.67	54.00	40.67	AVG	
3		2483.500	29.37	32.19	61.56	74.00	-12.44	peak	
4		2483.500	17.09	32.19	49.28	54.00	-4.72	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz		

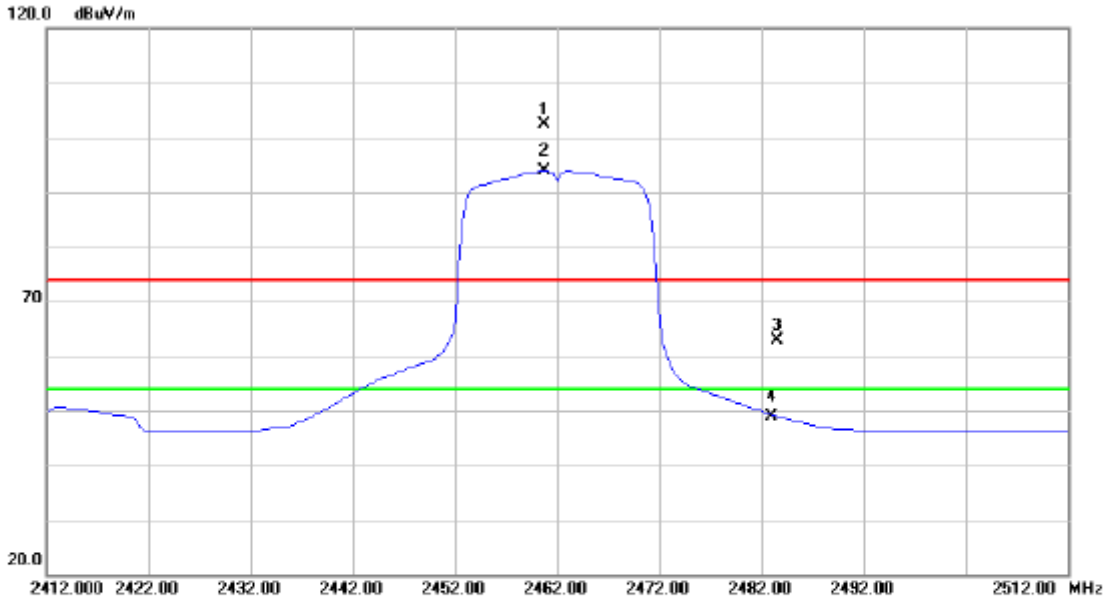
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4923.985	44.29	6.34	50.63	74.00	-23.37	peak	
2		4923.985	32.75	6.34	39.09	54.00	-14.91	AVG	
3		7386.225	45.34	13.05	58.39	74.00	-15.61	peak	
4	*	7386.225	31.52	13.05	44.57	54.00	-9.43	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz		

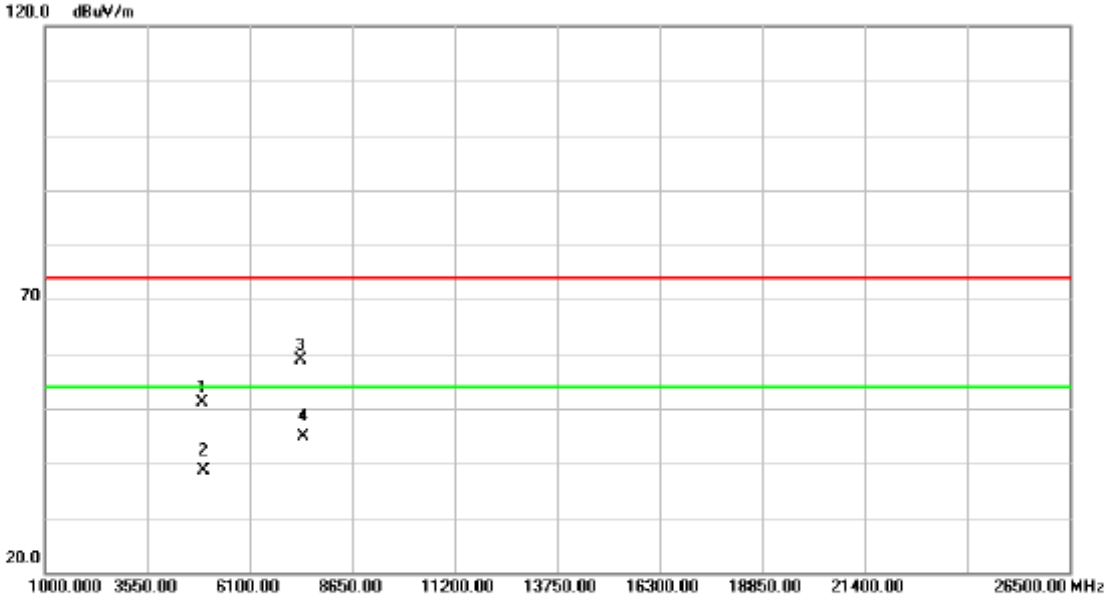
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2460.750	70.35	32.10	102.45	74.00	28.45	peak	
2	*	2460.750	61.74	32.10	93.84	54.00	39.84	AVG	
3		2483.500	30.62	32.19	62.81	74.00	-11.19	peak	
4		2483.500	16.79	32.19	48.98	54.00	-5.02	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz		

Polarization: Horizontal

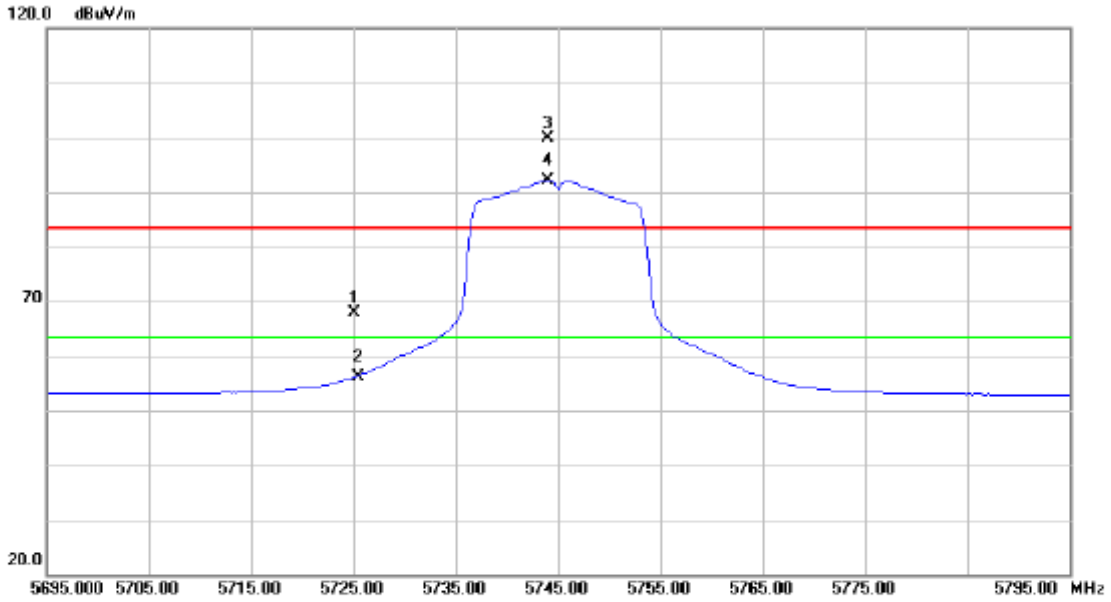


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4923.455	44.75	6.34	51.09	74.00	-22.91	peak	
2		4923.455	32.37	6.34	38.71	54.00	-15.29	AVG	
3		7386.000	45.87	13.05	58.92	74.00	-15.08	peak	
4	*	7386.000	31.86	13.05	44.91	54.00	-9.09	AVG	

9.9 TEST RESULTS - 5745-5825 MHZ

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5745 MHz		

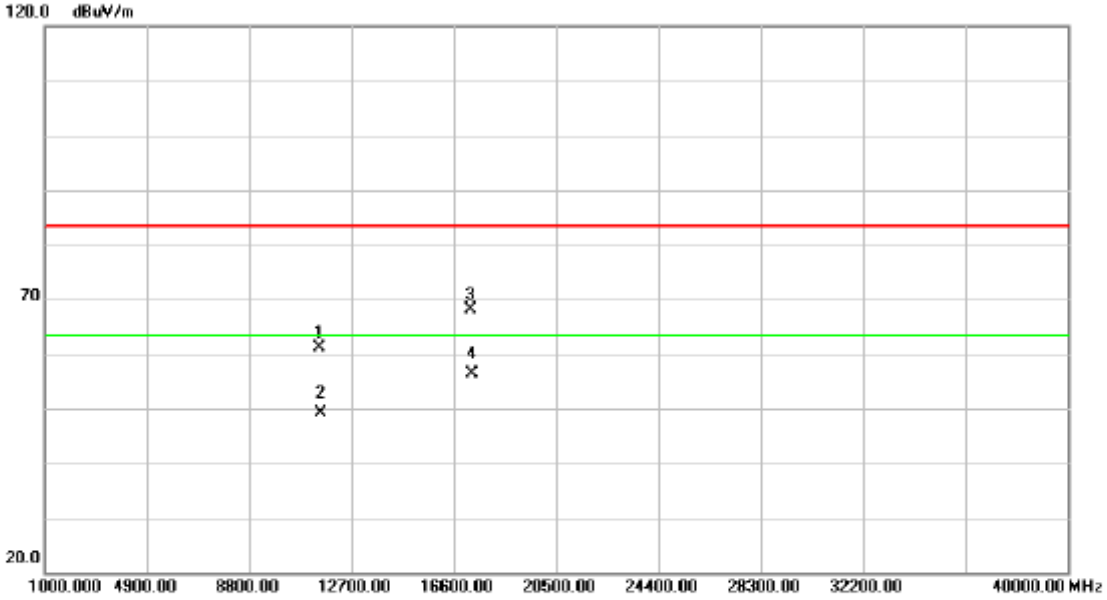
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5725.000	28.14	39.65	67.79	83.50	-15.71	peak	
2		5725.000	16.39	39.65	56.04	63.50	-7.46	AVG	
3	X	5744.000	60.18	39.70	99.88	83.50	16.38	peak	
4	*	5744.000	52.32	39.70	92.02	63.50	28.52	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5745 MHz		

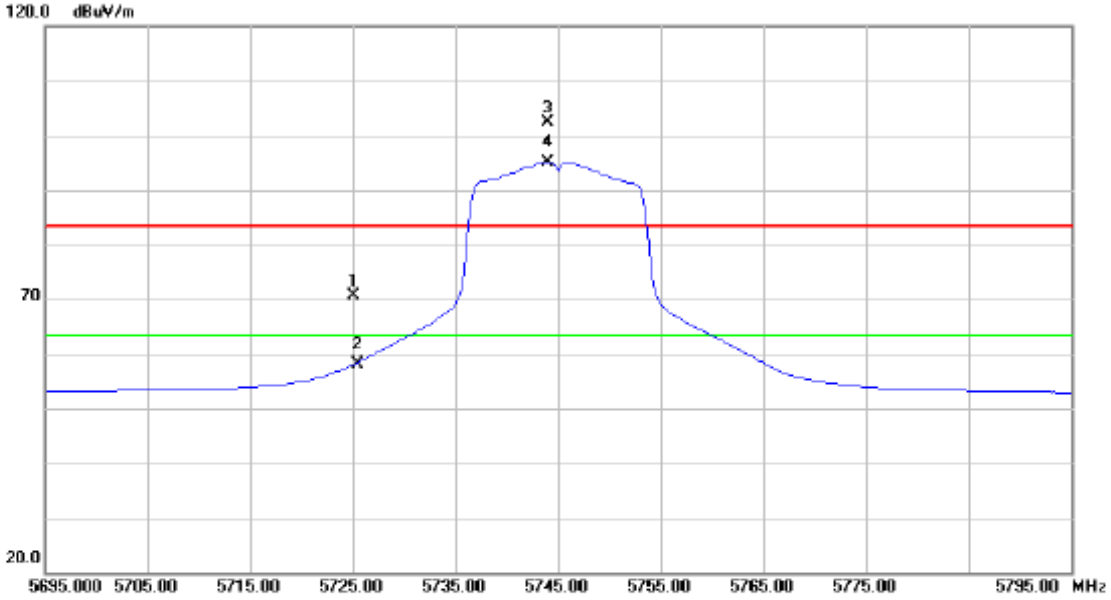
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11489.45	42.83	18.29	61.12	83.50	-22.38	peak	
2		11489.71	30.83	18.29	49.12	63.50	-14.38	AVG	
3		17234.15	42.96	25.27	68.23	83.50	-15.27	peak	
4	*	17234.15	31.13	25.27	56.40	63.50	-7.10	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5745 MHz		

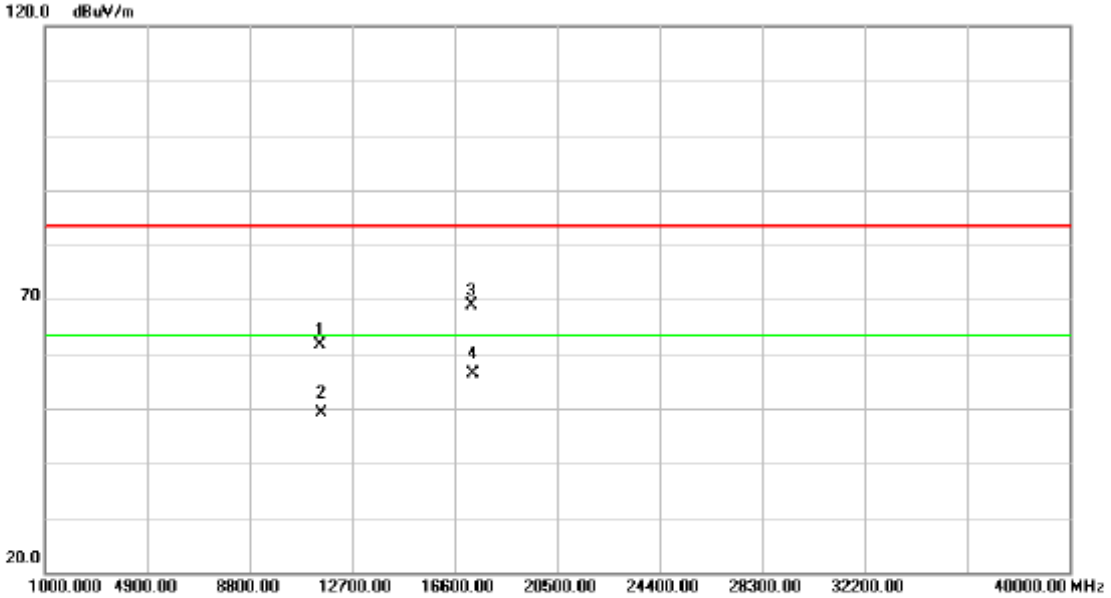
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5725.000	30.97	39.65	70.62	83.50	-12.88	peak	
2		5725.000	18.36	39.65	58.01	63.50	-5.49	AVG	
3	X	5744.000	62.58	39.70	102.28	83.50	18.78	peak	
4	*	5744.000	55.41	39.70	95.11	63.50	31.61	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5745 MHz		

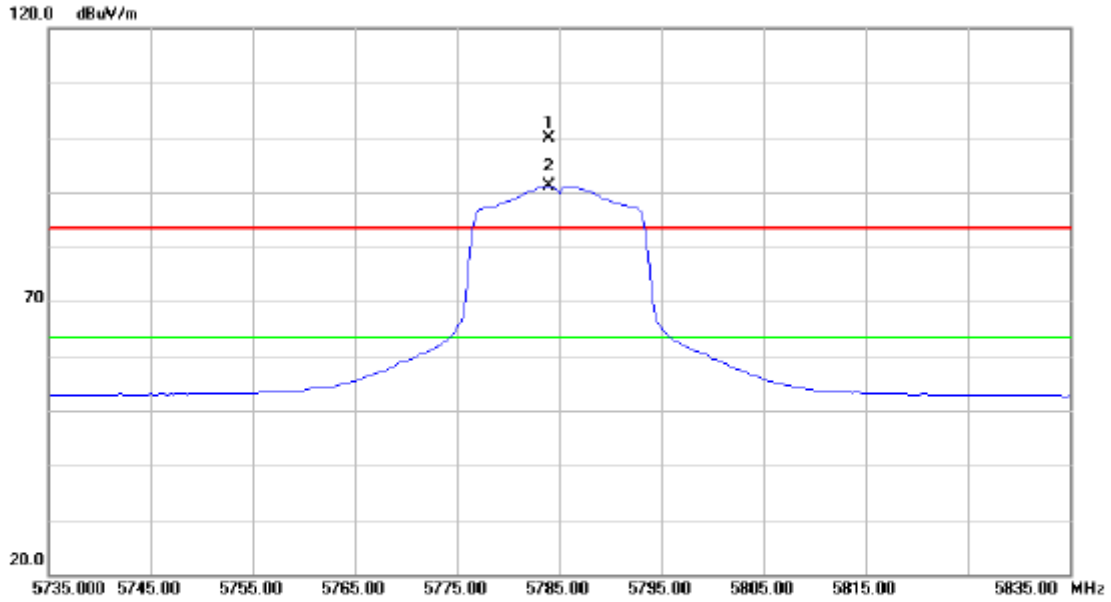
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11489.93	43.22	18.29	61.51	83.50	-21.99	peak	
2		11489.93	30.87	18.29	49.16	63.50	-14.34	AVG	
3		17234.74	43.63	25.27	68.90	83.50	-14.60	peak	
4	*	17234.74	31.18	25.27	56.45	63.50	-7.05	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5785 MHz		

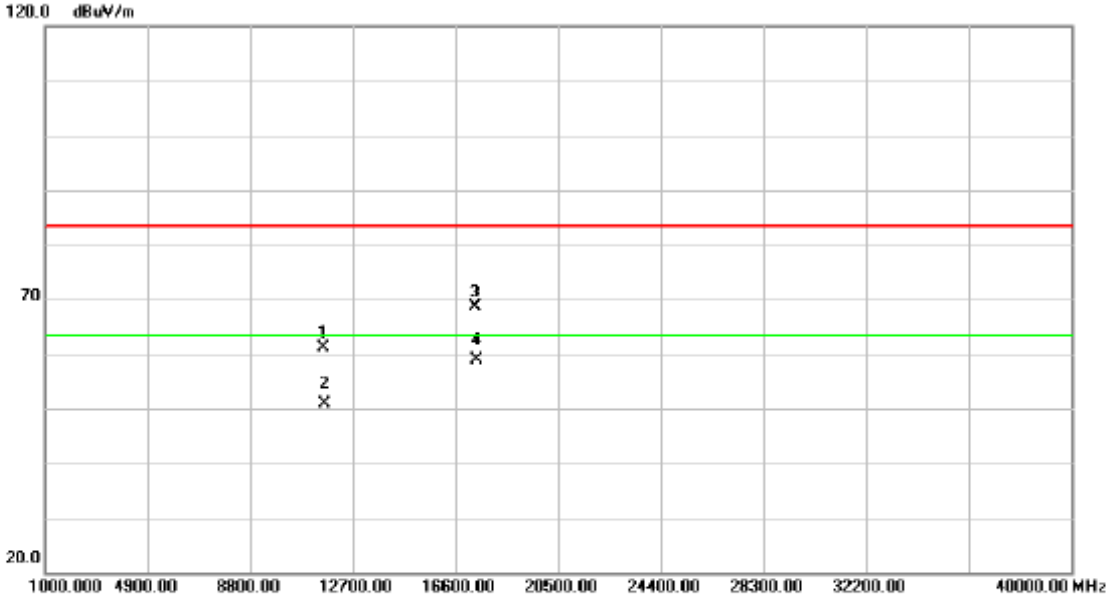
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5784.000	60.15	39.80	99.95	83.50	16.45	peak	
2	*	5784.000	51.34	39.80	91.14	63.50	27.64	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5785 MHz		

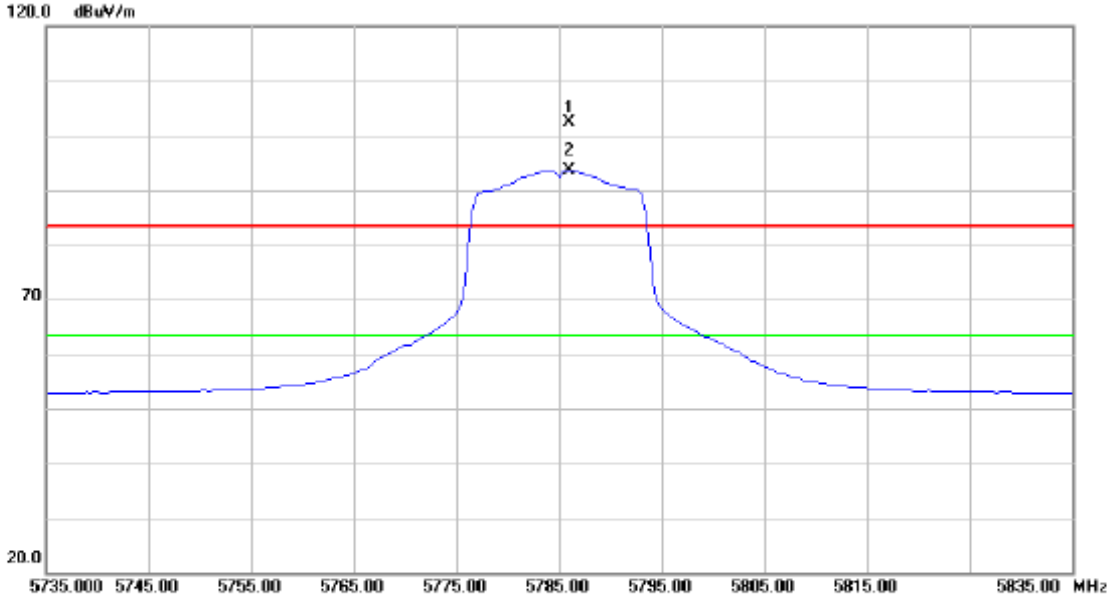
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11569.47	42.94	18.30	61.24	83.50	-22.26	peak	
2		11569.47	32.47	18.30	50.77	63.50	-12.73	AVG	
3		17354.62	42.45	26.11	68.56	83.50	-14.94	peak	
4	*	17354.62	32.84	26.11	58.95	63.50	-4.55	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5785 MHz		

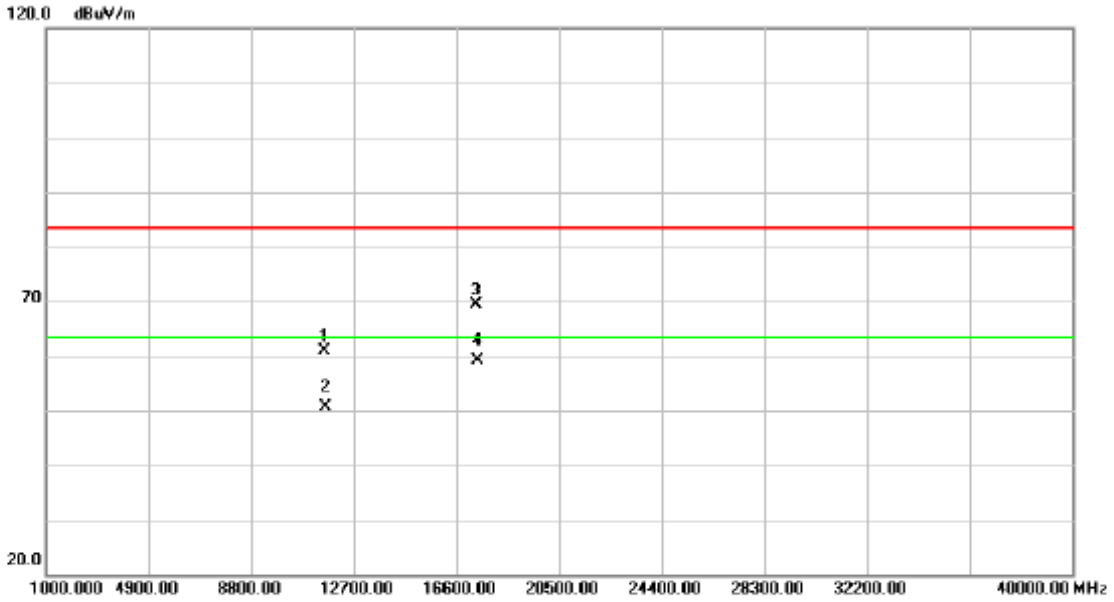
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5786.000	62.58	39.81	102.39	83.50	18.89	peak	
2	*	5786.000	53.82	39.81	93.63	63.50	30.13	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5785 MHz		

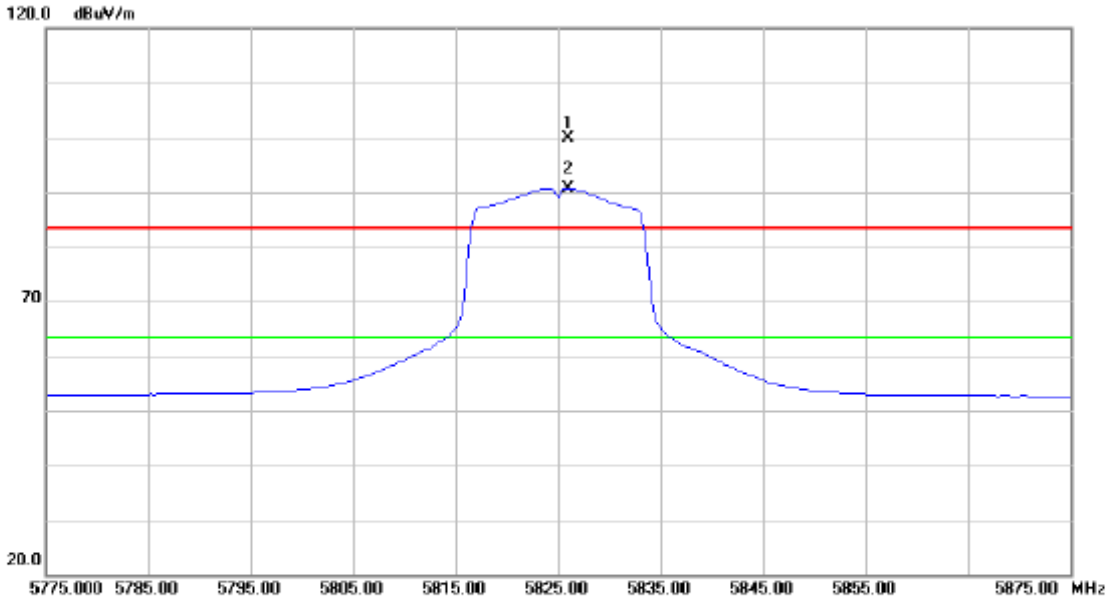
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11571.68	42.69	18.31	61.00	83.50	-22.50	peak	
2		11571.68	32.42	18.31	50.73	63.50	-12.77	AVG	
3		17355.03	43.27	26.13	69.40	83.50	-14.10	peak	
4	*	17355.03	32.91	26.13	59.04	63.50	-4.46	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5825 MHz		

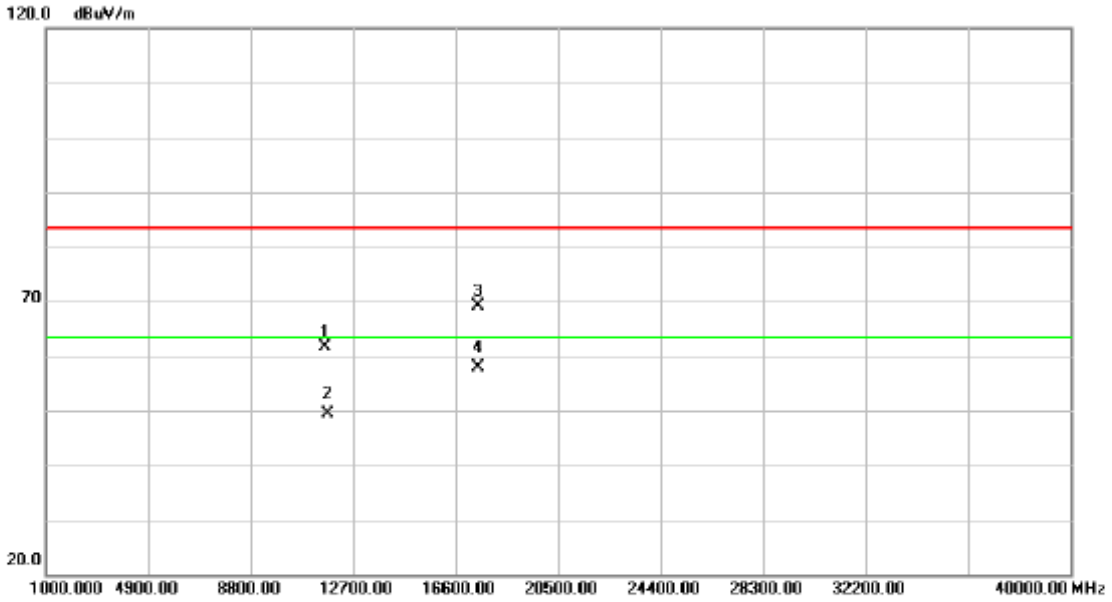
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5826.000	60.05	39.90	99.95	83.50	16.45	peak	
2	*	5826.000	50.75	39.90	90.65	63.50	27.15	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5825 MHz		

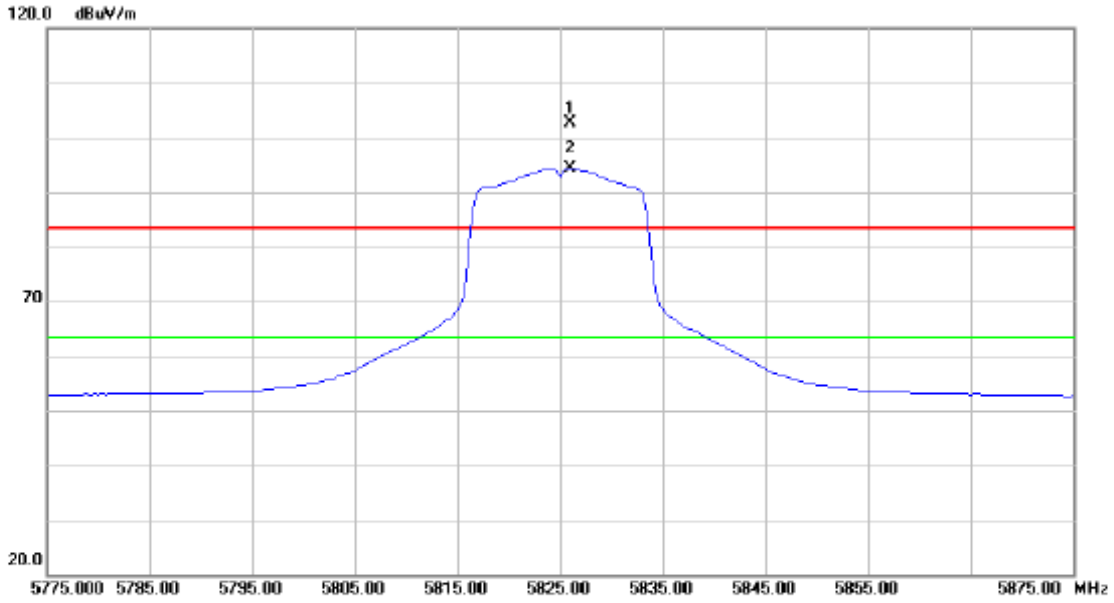
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11649.99	43.27	18.33	61.60	83.50	-21.90	peak	
2		11649.99	31.13	18.33	49.46	63.50	-14.04	AVG	
3		17474.98	42.12	26.95	69.07	83.50	-14.43	peak	
4	*	17474.98	30.85	26.95	57.80	63.50	-5.70	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5825 MHz		

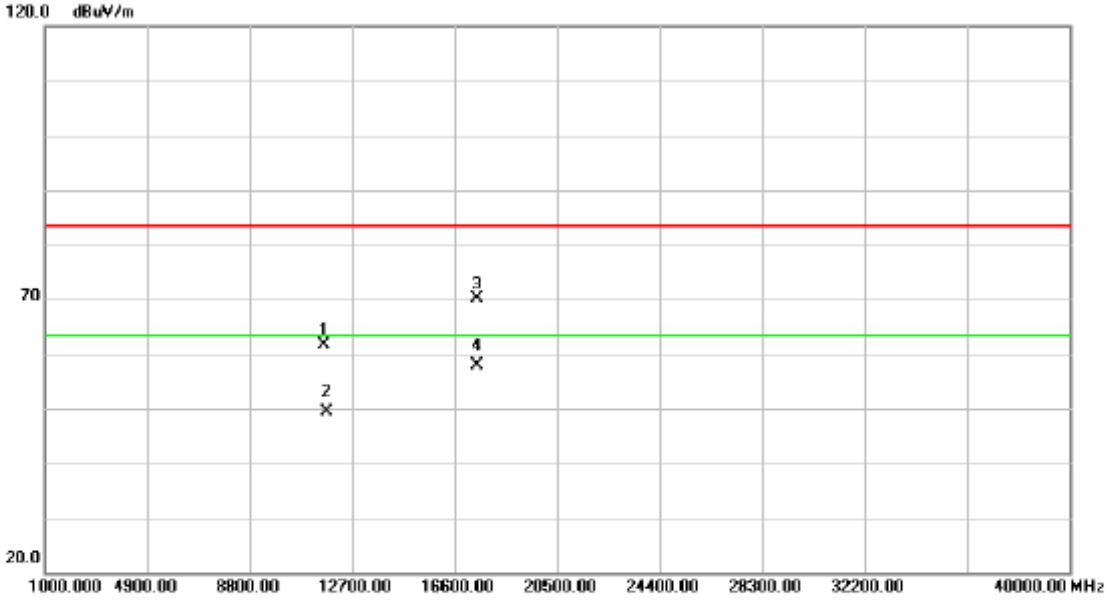
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5826.000	62.65	39.90	102.55	83.50	19.05	peak	
2	*	5826.000	54.50	39.90	94.40	63.50	30.90	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5825 MHz		

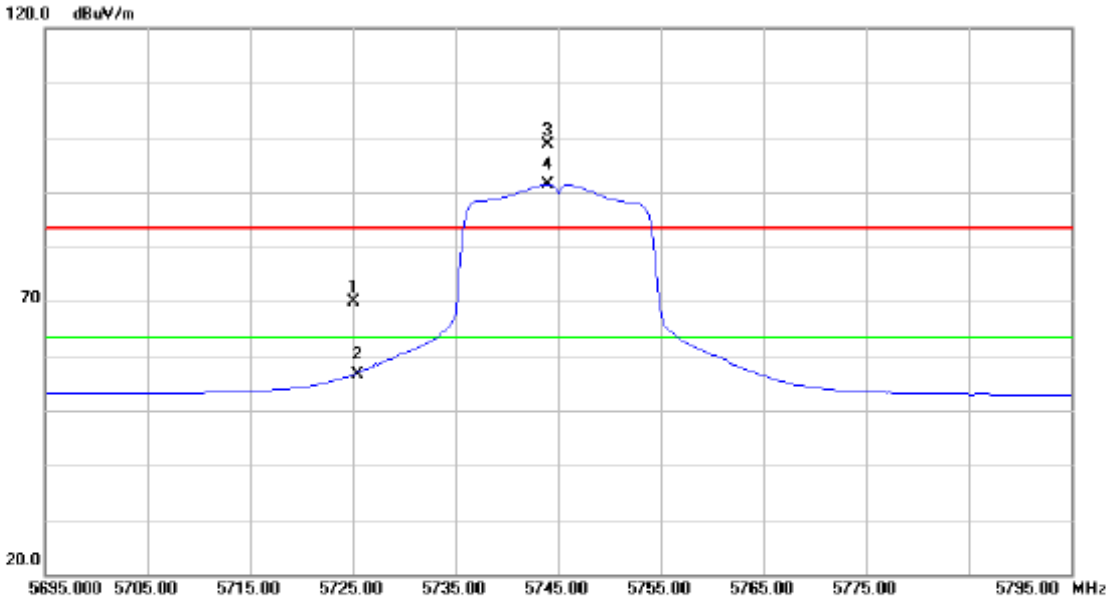
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11649.11	43.26	18.33	61.59	83.50	-21.91	peak	
2		11649.11	31.06	18.33	49.39	63.50	-14.11	AVG	
3		17474.83	43.20	26.95	70.15	83.50	-13.35	peak	
4	*	17474.83	30.87	26.95	57.82	63.50	-5.68	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/5745 MHz		

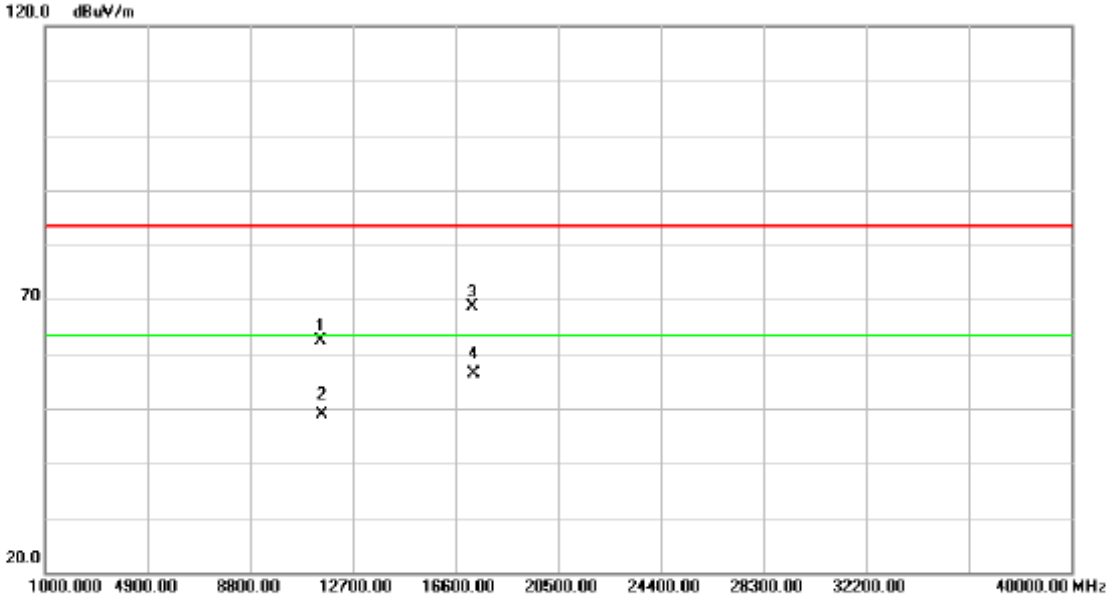
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5725.000	30.22	39.65	69.87	83.50	-13.63	peak	
2		5725.000	16.96	39.65	56.61	63.50	-6.89	AVG	
3	X	5744.000	58.86	39.70	98.56	83.50	15.06	peak	
4	*	5744.000	51.68	39.70	91.38	63.50	27.88	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/5745 MHz		

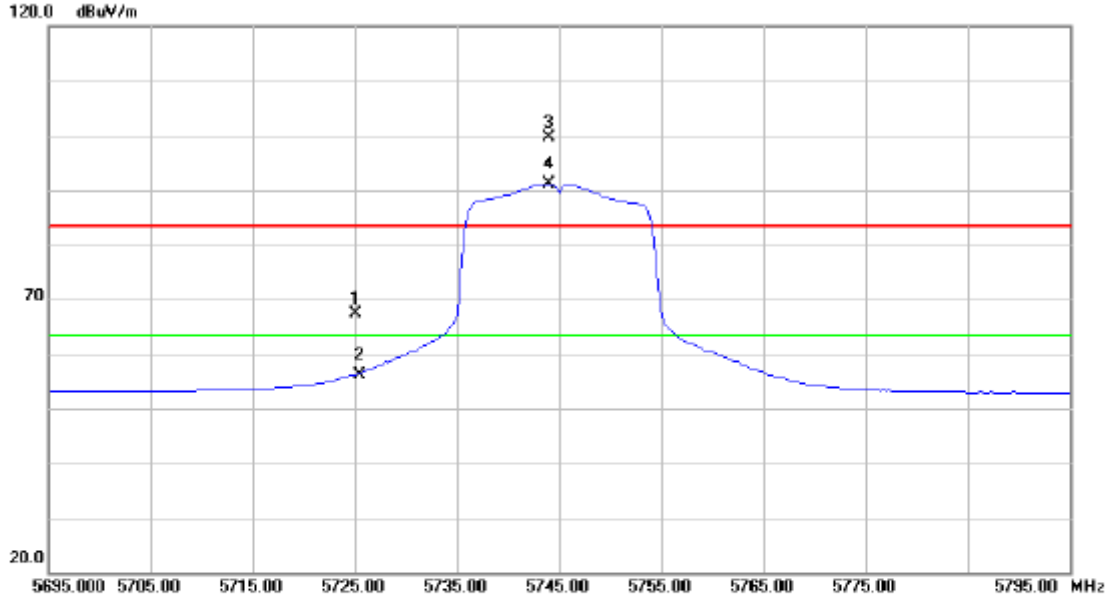
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11490.23	44.09	18.29	62.38	83.50	-21.12	peak	
2		11490.23	30.69	18.29	48.98	63.50	-14.52	AVG	
3		17235.78	43.41	25.28	68.69	83.50	-14.81	peak	
4	*	17235.78	30.98	25.28	56.26	63.50	-7.24	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/5745 MHz		

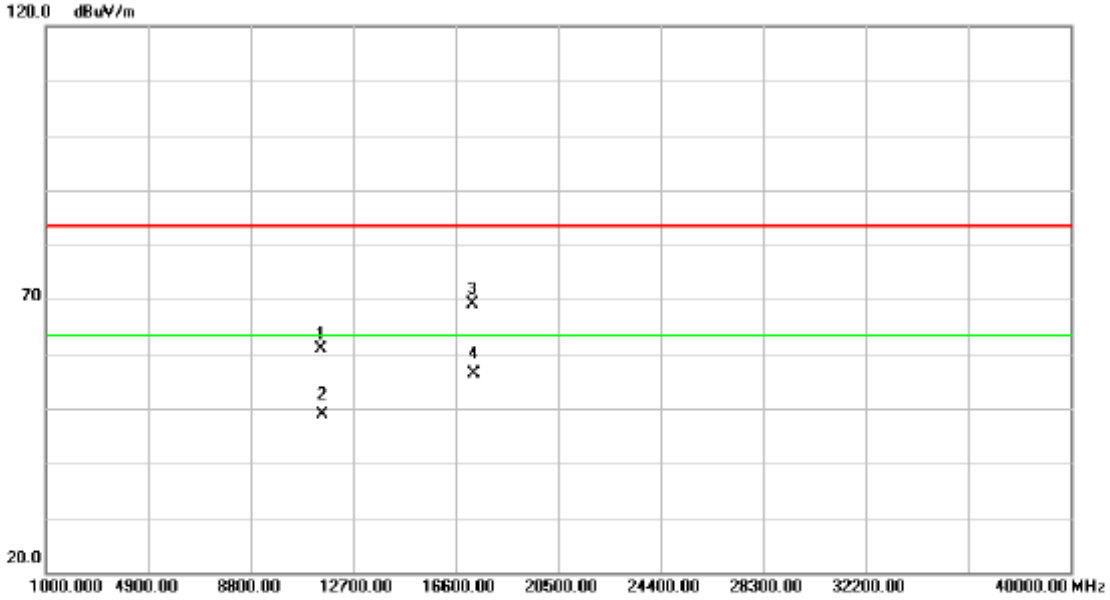
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		5725.000	27.76	39.65	67.41	83.50	-16.09	peak	
2		5725.000	16.53	39.65	56.18	63.50	-7.32	AVG	
3	X	5744.000	60.02	39.70	99.72	83.50	16.22	peak	
4	*	5744.000	51.51	39.70	91.21	63.50	27.71	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/5745 MHz		

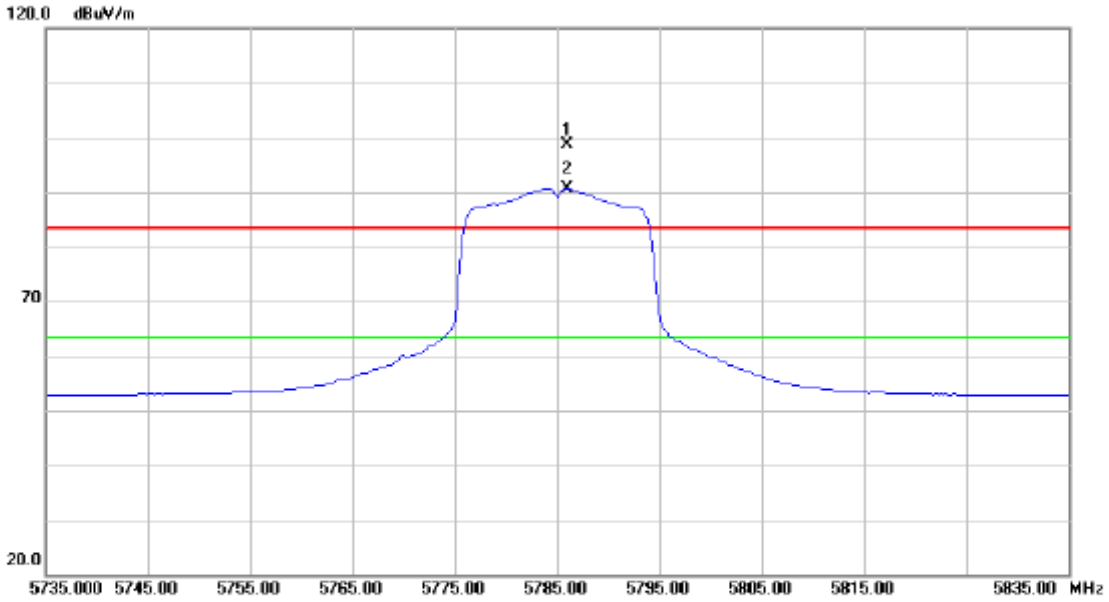
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11490.26	42.54	18.29	60.83	83.50	-22.67	peak	
2		11490.26	30.69	18.29	48.98	63.50	-14.52	AVG	
3		17235.49	43.92	25.28	69.20	83.50	-14.30	peak	
4	*	17235.49	31.04	25.28	56.32	63.50	-7.18	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/5785 MHz		

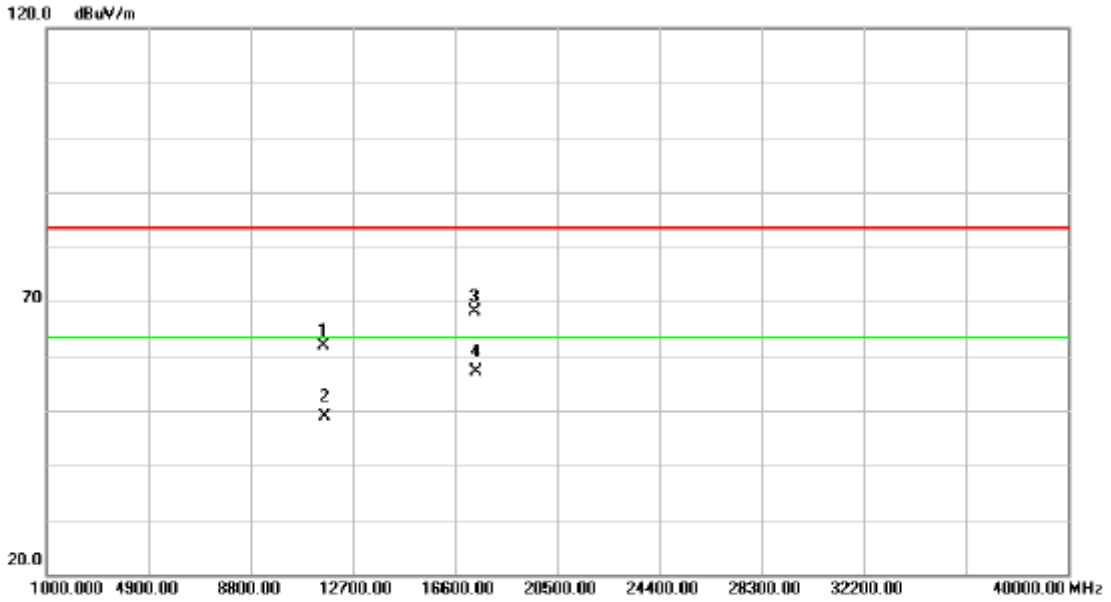
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5786.000	58.77	39.81	98.58	83.50	15.08	peak	
2	*	5786.000	50.75	39.81	90.56	63.50	27.06	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/5785 MHz		

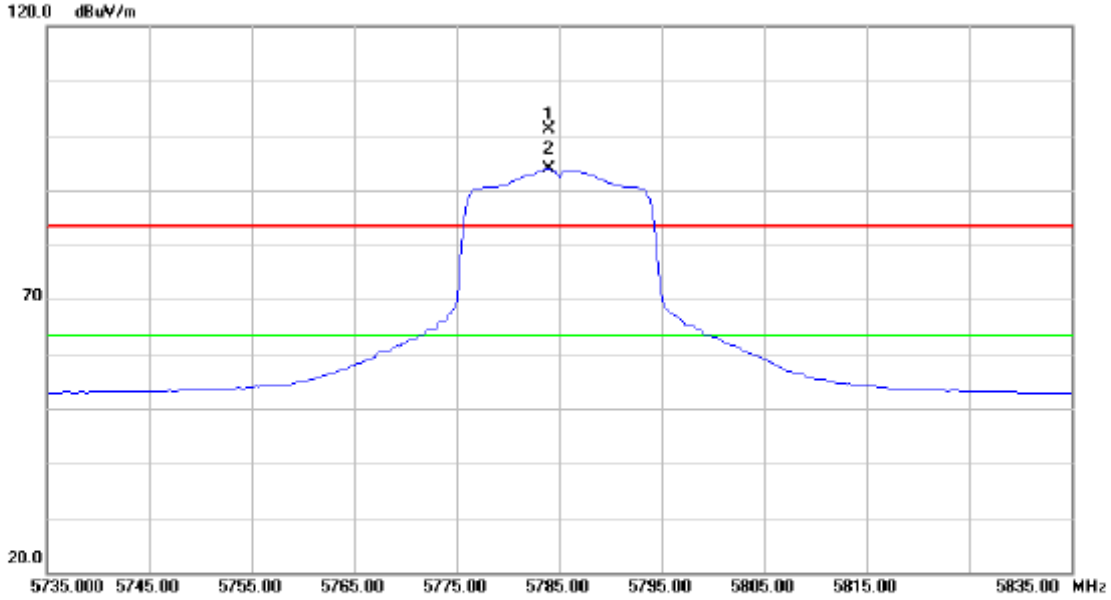
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11570.84	43.63	18.31	61.94	83.50	-21.56	peak	
2		11570.84	30.57	18.31	48.88	63.50	-14.62	AVG	
3		17354.66	42.13	26.11	68.24	83.50	-15.26	peak	
4	*	17354.66	30.95	26.11	57.06	63.50	-6.44	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/5785 MHz		

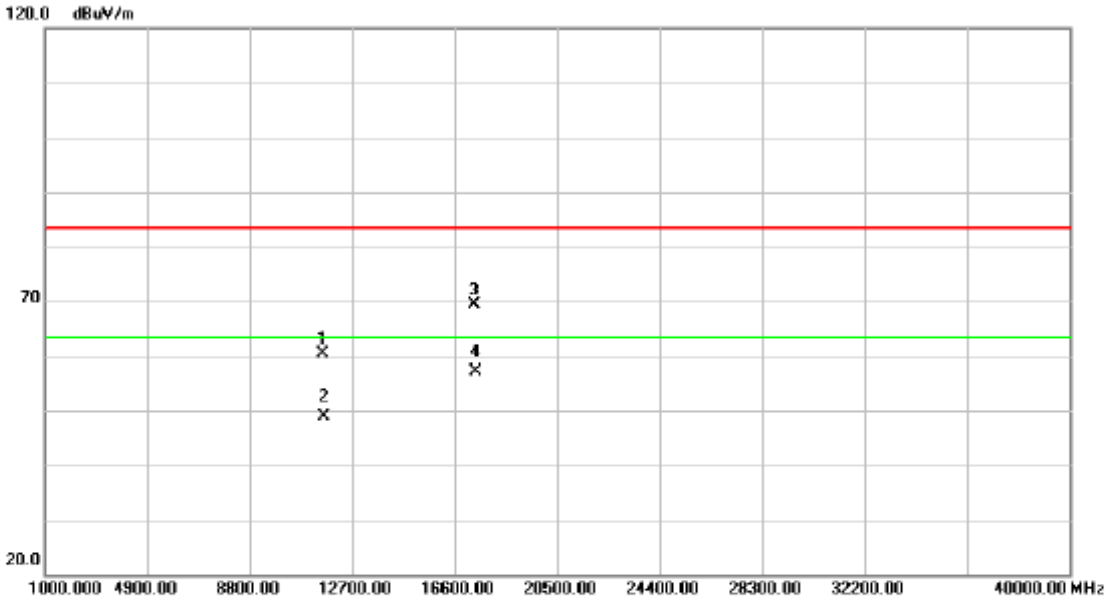
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5784.000	61.25	39.80	101.05	83.50	17.55	peak	
2	*	5784.000	54.03	39.80	93.83	63.50	30.33	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/5785 MHz		

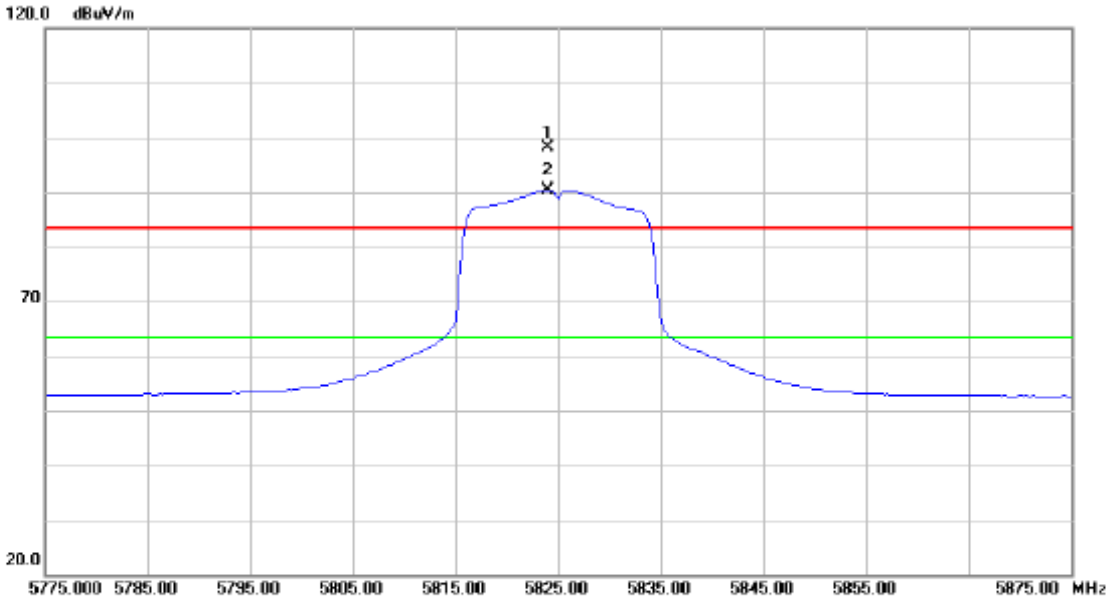
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11569.43	42.12	18.30	60.42	83.50	-23.08	peak	
2		11569.43	30.55	18.30	48.85	63.50	-14.65	AVG	
3		17354.42	43.32	26.11	69.43	83.50	-14.07	peak	
4	*	17354.42	30.96	26.11	57.07	63.50	-6.43	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/5825 MHz		

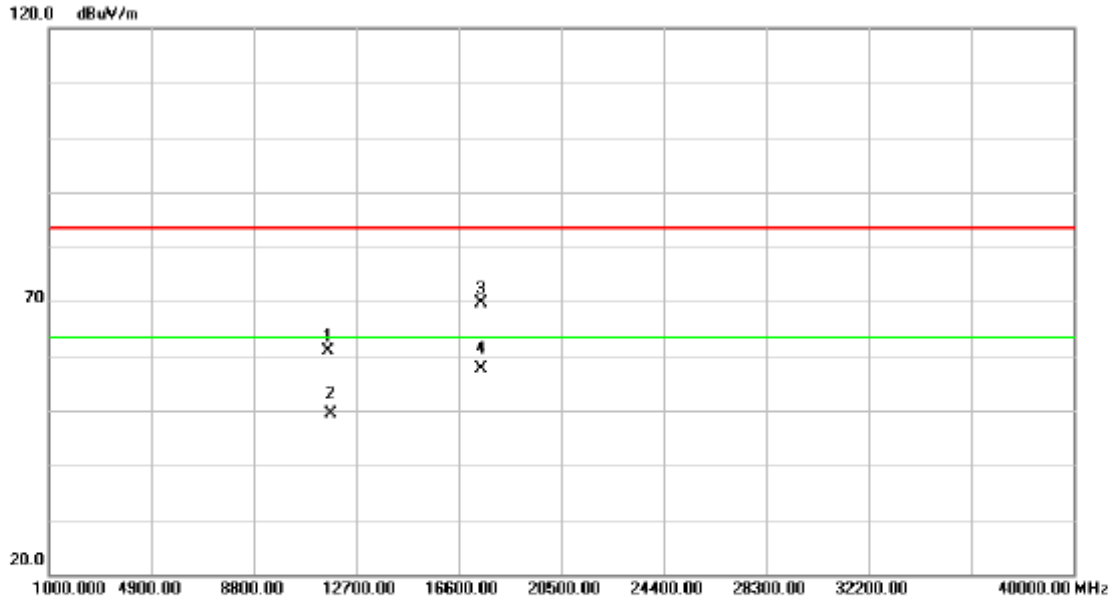
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5824.000	58.30	39.90	98.20	83.50	14.70	peak	
2	*	5824.000	50.48	39.90	90.38	63.50	26.88	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/5825 MHz		

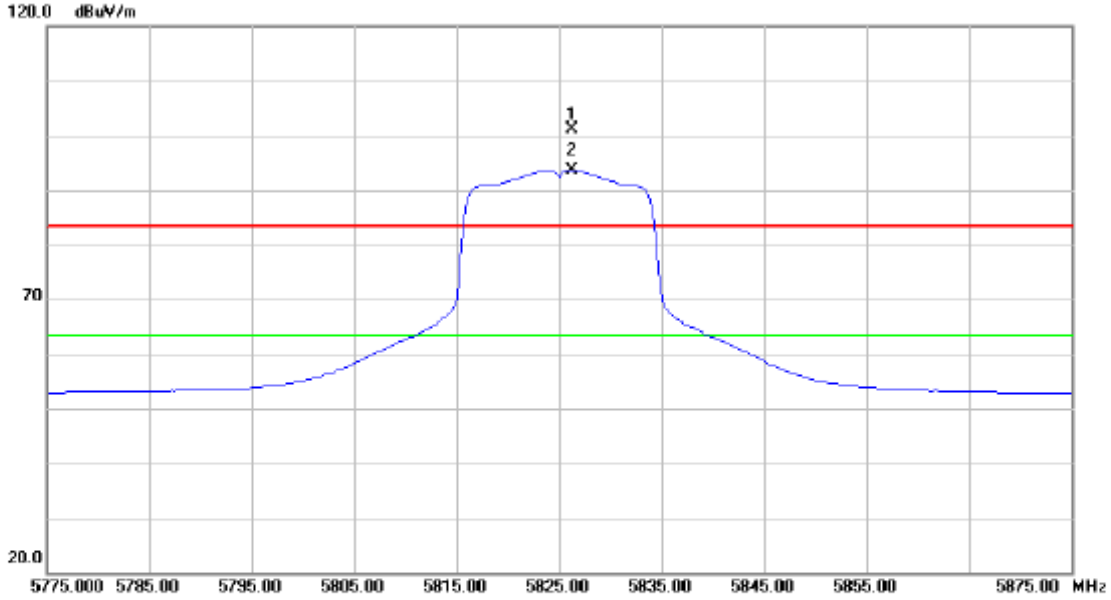
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11649.88	42.67	18.33	61.00	83.50	-22.50	peak	
2		11649.88	30.98	18.33	49.31	63.50	-14.19	AVG	
3		17474.51	42.72	26.95	69.67	83.50	-13.83	peak	
4	*	17474.51	30.78	26.95	57.73	63.50	-5.77	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/5825 MHz		

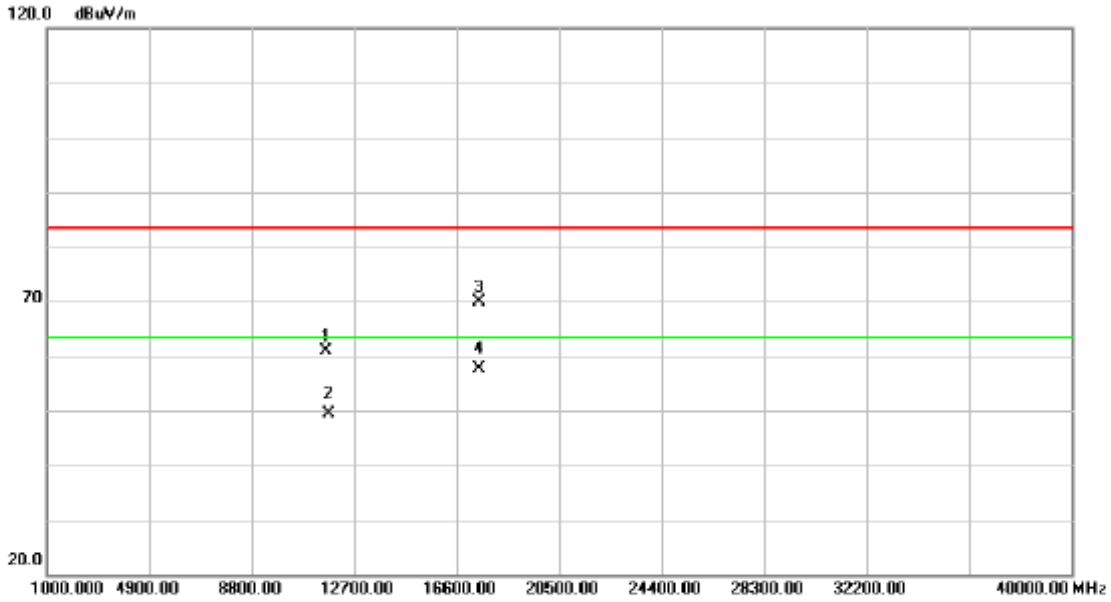
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	5826.250	61.27	39.90	101.17	83.50	17.67	peak	
2	*	5826.250	53.80	39.90	93.70	63.50	30.20	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/5825 MHz		

Polarization: Horizontal

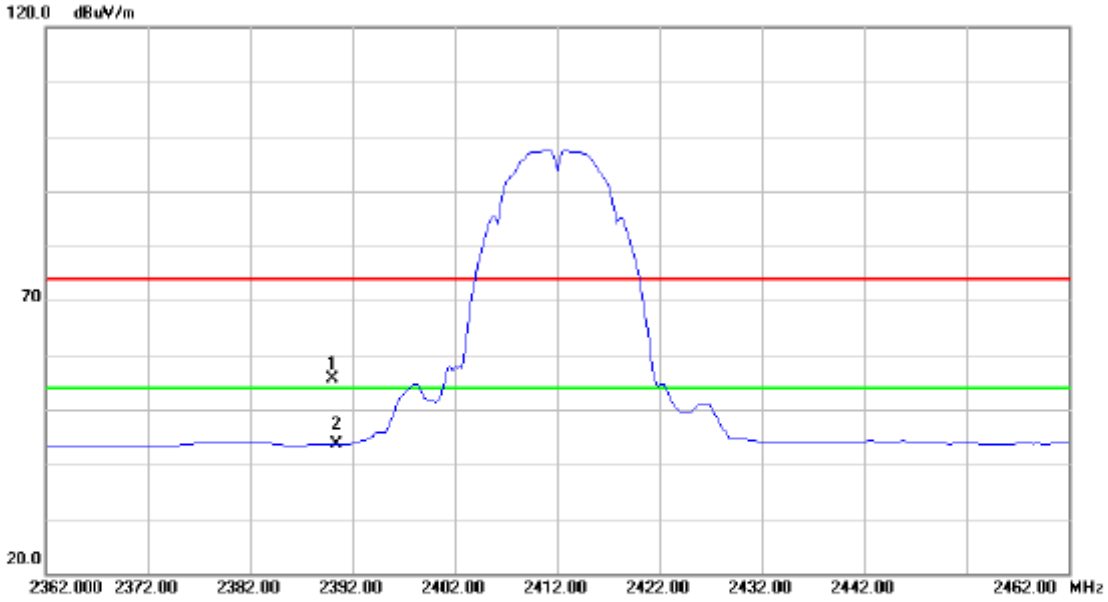


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		11650.91	42.65	18.33	60.98	83.50	-22.52	peak	
2		11650.91	31.01	18.33	49.34	63.50	-14.16	AVG	
3		17475.07	42.89	26.96	69.85	83.50	-13.65	peak	
4	*	17475.07	30.71	26.96	57.67	63.50	-5.83	AVG	

9.10TEST RESULTS (RESTRICTED BANDS)

EUT	Mobile Computer	Model Name	9700
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

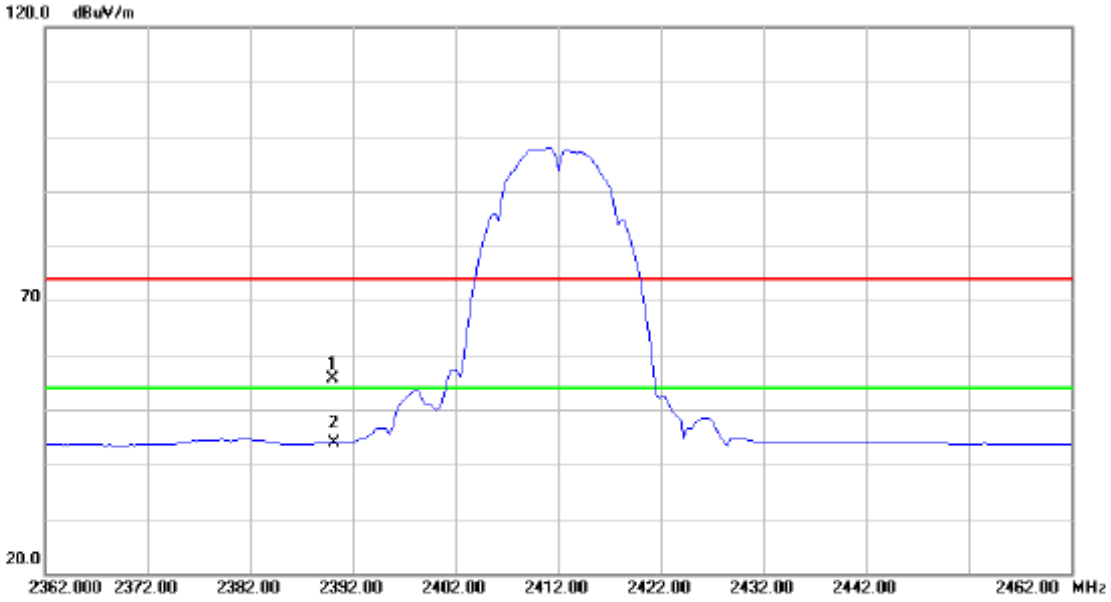
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	23.75	31.81	55.56	74.00	-18.44	peak	
2	*	2390.000	11.76	31.81	43.57	54.00	-10.43	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

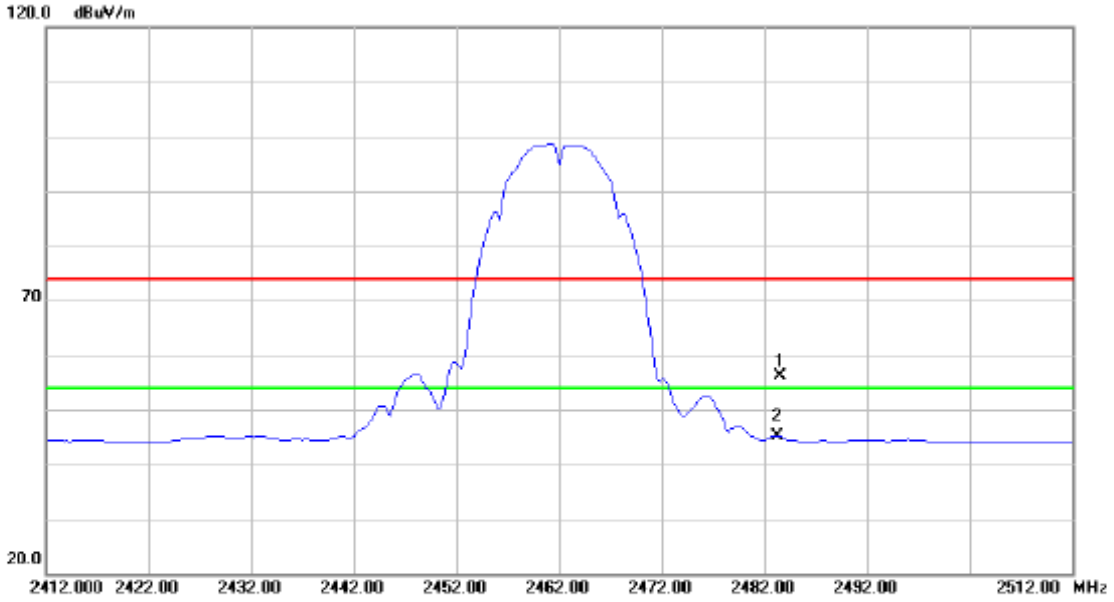
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	23.85	31.81	55.66	74.00	-18.34	peak	
2	*	2390.000	12.12	31.81	43.93	54.00	-10.07	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

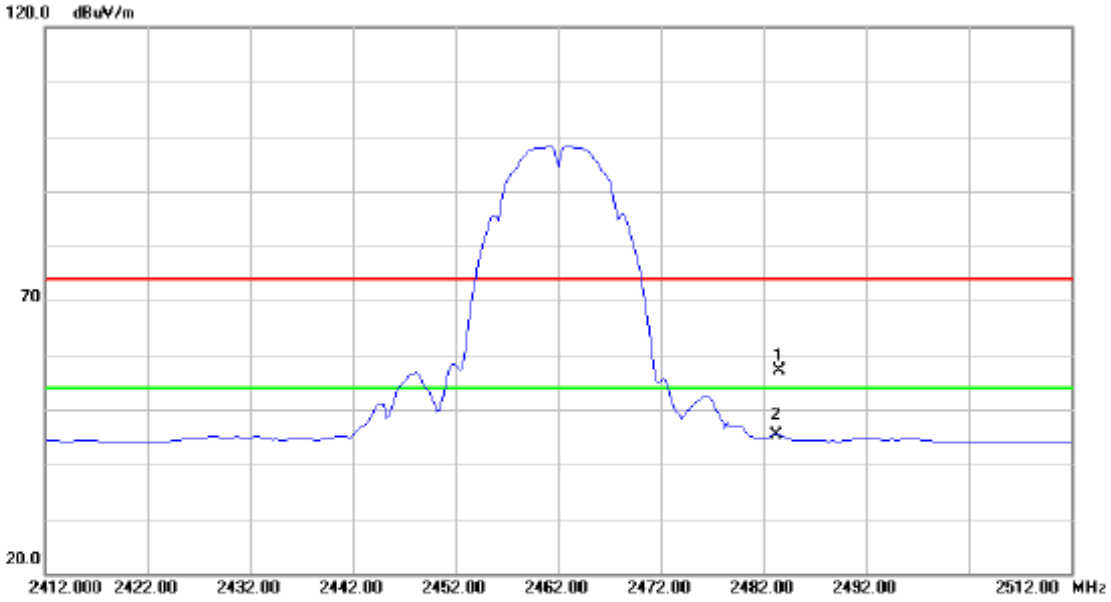
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	23.99	32.19	56.18	74.00	-17.82	peak	
2	*	2483.500	12.90	32.19	45.09	54.00	-8.91	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

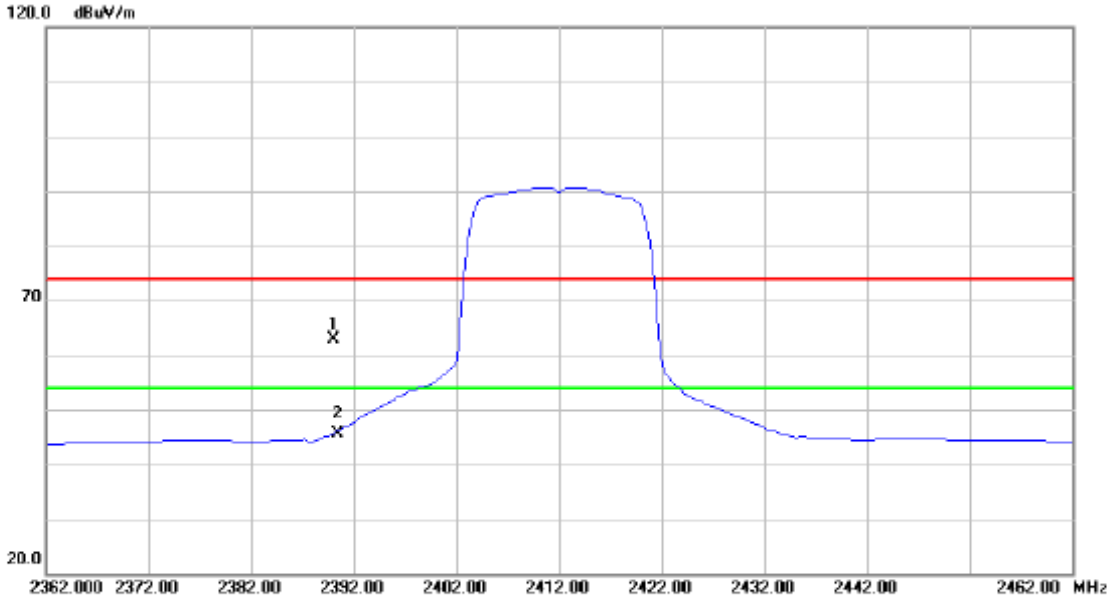
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	24.85	32.19	57.04	74.00	-16.96	peak	
2	*	2483.500	13.12	32.19	45.31	54.00	-8.69	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

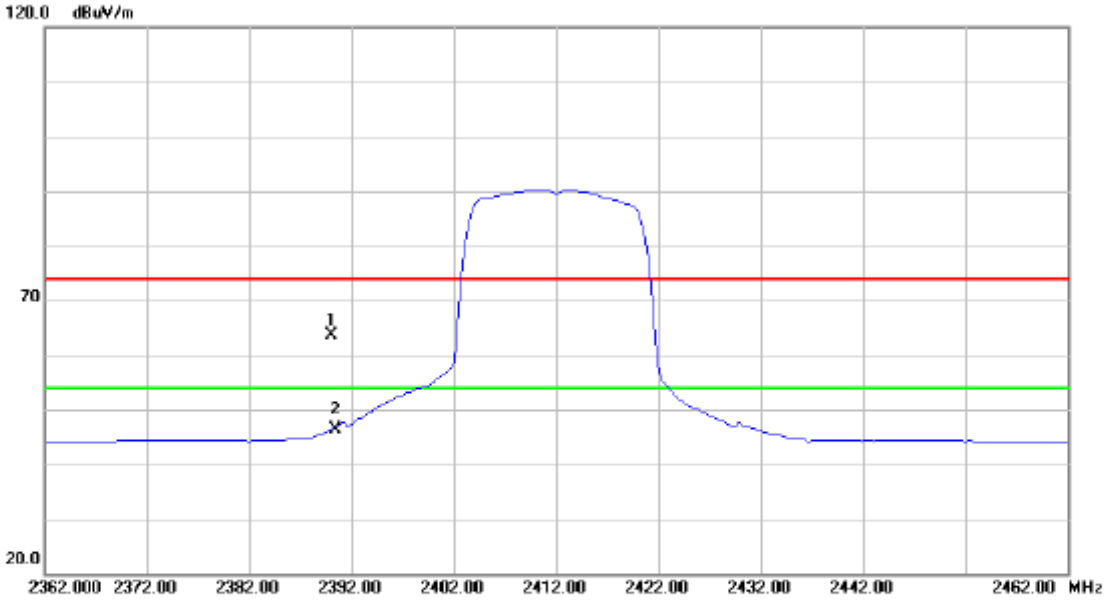
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	31.13	31.81	62.94	74.00	-11.06	peak	
2	*	2390.000	13.86	31.81	45.67	54.00	-8.33	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

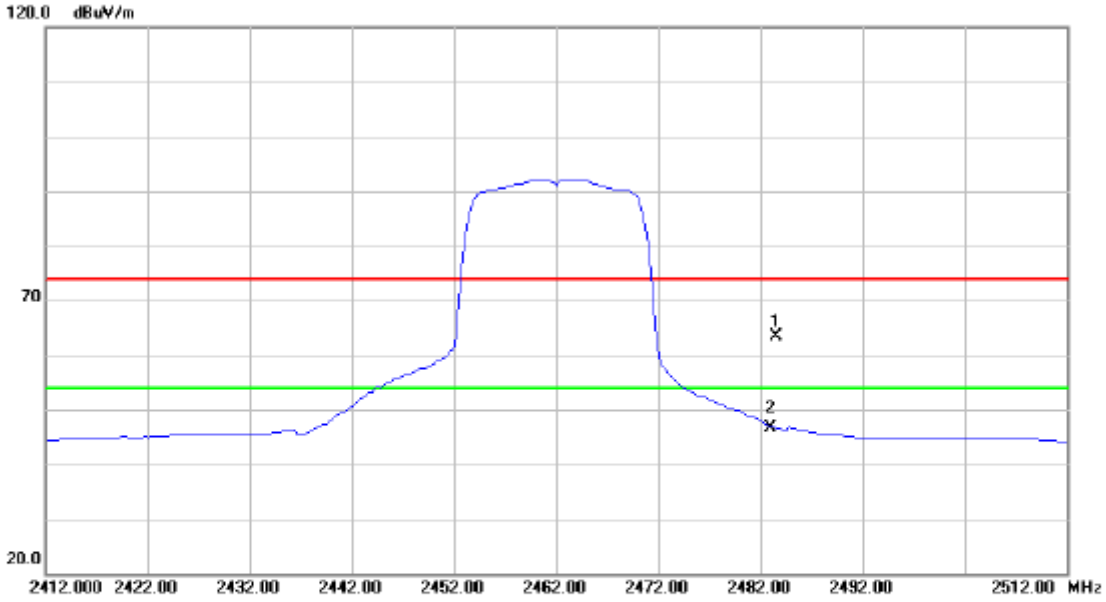
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	31.77	31.81	63.58	74.00	-10.42	peak	
2	*	2390.000	14.53	31.81	46.34	54.00	-7.66	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

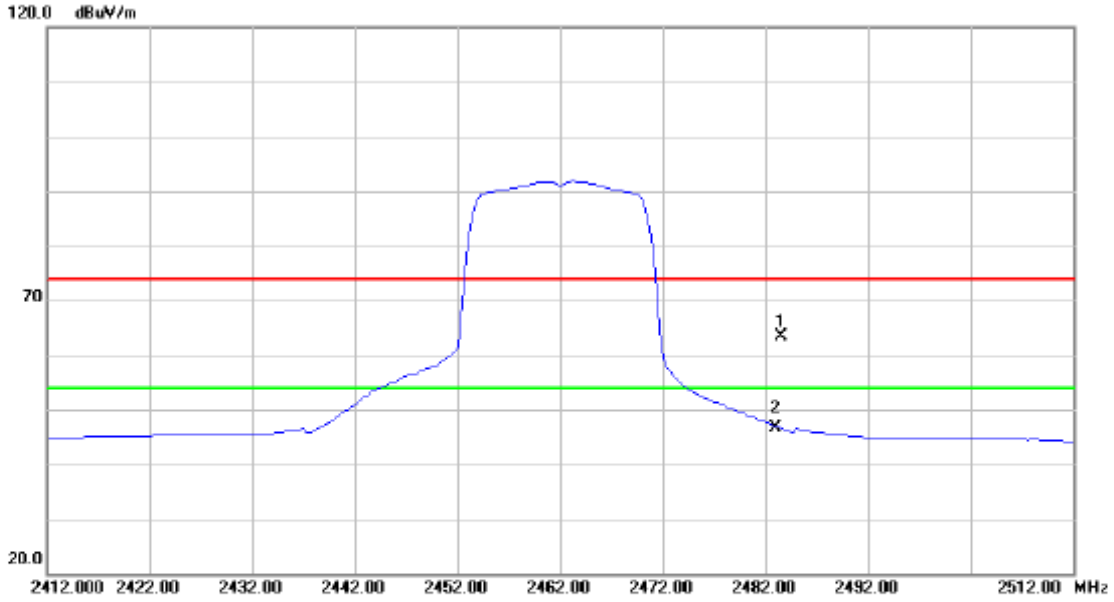
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	31.27	32.19	63.46	74.00	-10.54	peak	
2	*	2483.500	14.55	32.19	46.74	54.00	-7.26	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

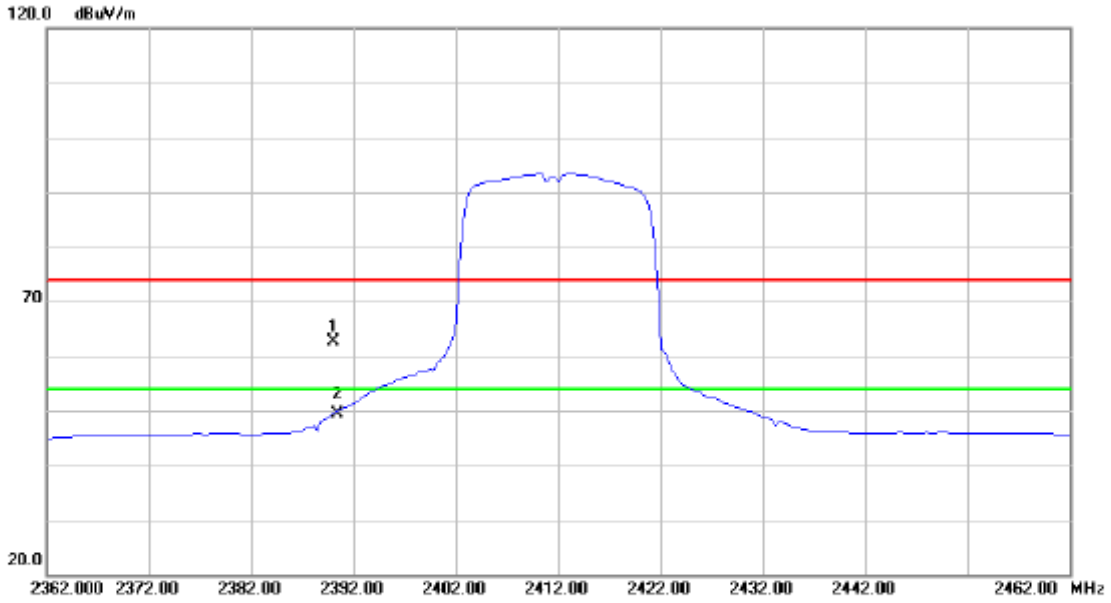
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	31.27	32.19	63.46	74.00	-10.54	peak	
2	*	2483.500	14.40	32.19	46.59	54.00	-7.41	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

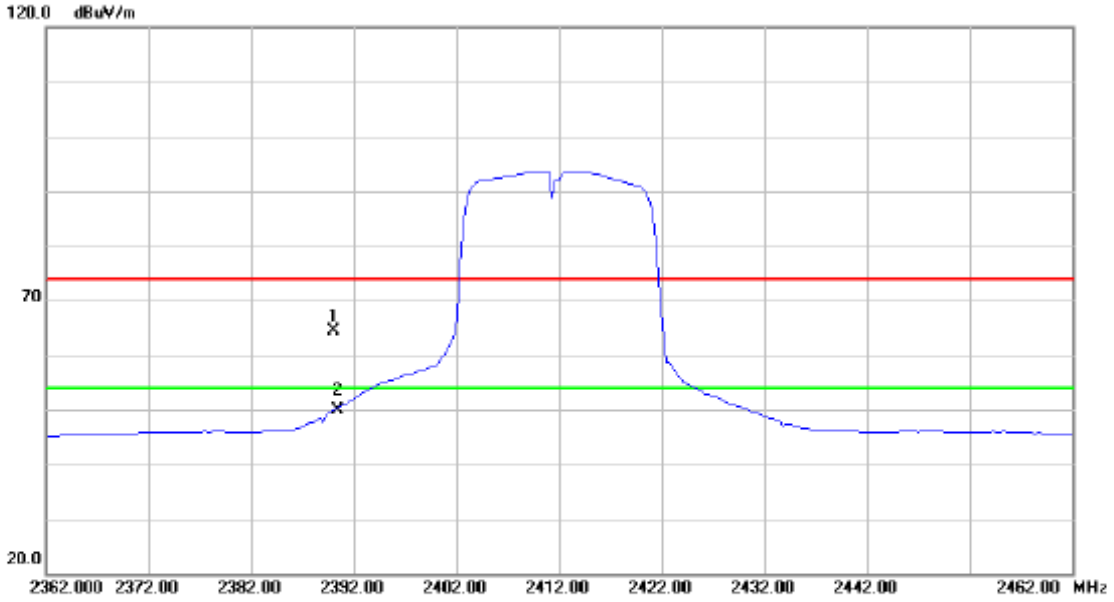
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	30.87	31.81	62.68	74.00	-11.32	peak	
2	*	2390.000	17.45	31.81	49.26	54.00	-4.74	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)		
NOTE	The transmitter was setup to transmit at the lowest channel and the field strength was measured at 2310-2390 MHz.		

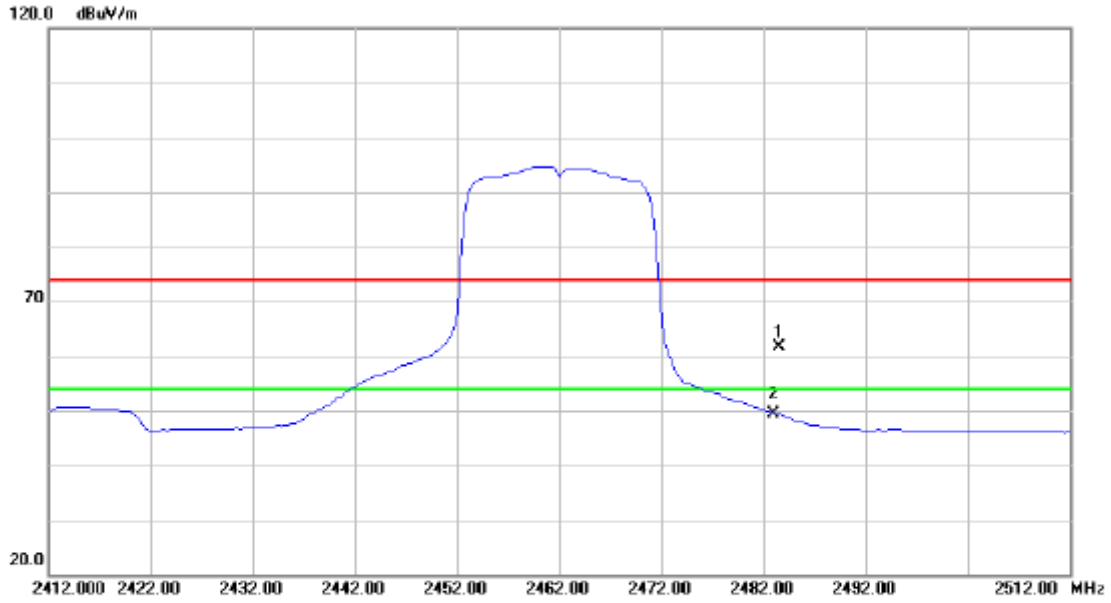
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	32.67	31.81	64.48	74.00	-9.52	peak	
2	*	2390.000	17.99	31.81	49.80	54.00	-4.20	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

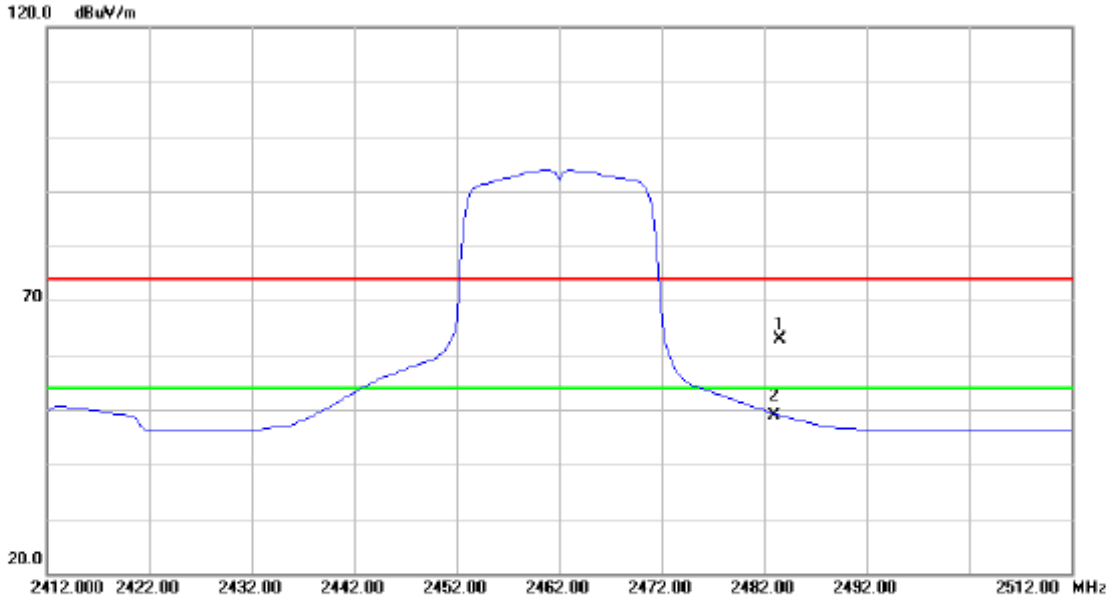
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	29.37	32.19	61.56	74.00	-12.44	peak	
2	*	2483.500	17.09	32.19	49.28	54.00	-4.72	AVG	

EUT	Mobile Computer	Model Name	9700
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)		
NOTE	The transmitter was setup to transmit at the highest channel and the field strength was measured at 2483.5-2500 MHz.		

Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	30.62	32.19	62.81	74.00	-11.19	peak	
2	*	2483.500	16.79	32.19	48.98	54.00	-5.02	AVG	

10 POWER SPECTRAL DENSITY

10.1 LIMIT

Test Item	Frequency Range (MHz)	Limit
Power Spectral Density	2400-2483.5	8 dBm (in any 3 kHz)

10.2 MEASUREMENT INSTRUMENTS LIST

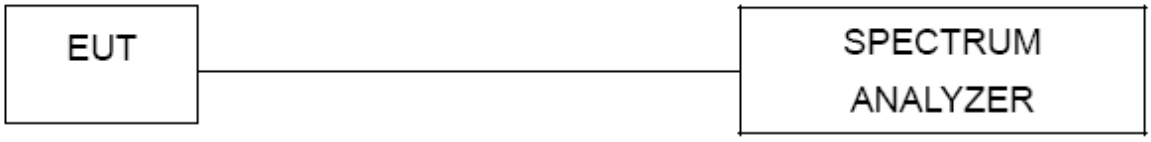
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014

NOTE: **N/A: denotes no modelname, no serial No. or no calibration specified.**

10.3 TEST PROCEDURES

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
b. Spectrum Setting: RBW=3 kHz, VBW=10 kHz, Sweep time = AUTO.

10.4 TEST SETUP LAYOUT



10.5 DEVIATION FROM TEST STANDARD

No deviation

10.6 EUT OPERATING CONDITIONS

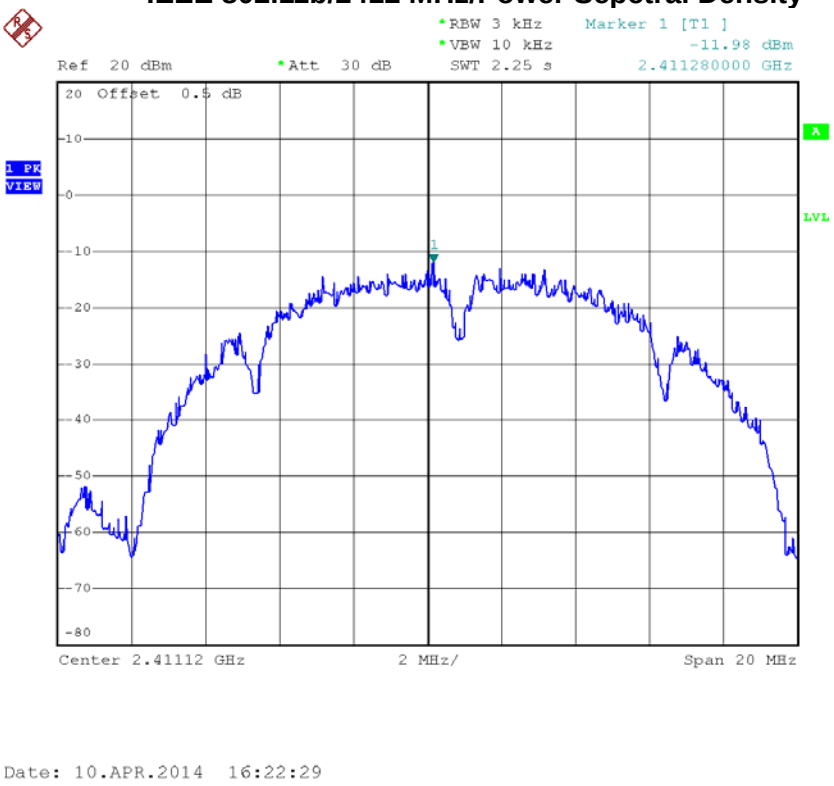
The EUT tested system was configured as the statements of 5.6 Unless otherwise a special operating condition is specified in the follows during the testing.

10.7TEST RESULTS - 2412-2462 MHZ

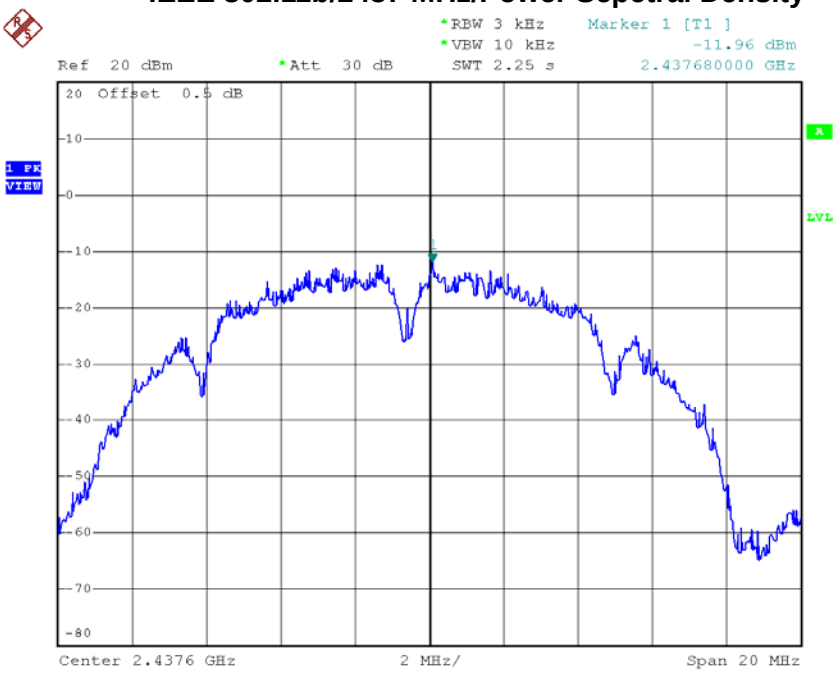
EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-11.98	8	PASS
2437 MHz	-11.96	8	PASS
2462 MHz	-10.22	8	PASS

IEEE 802.11b/2412 MHz/Power Sepctral Density

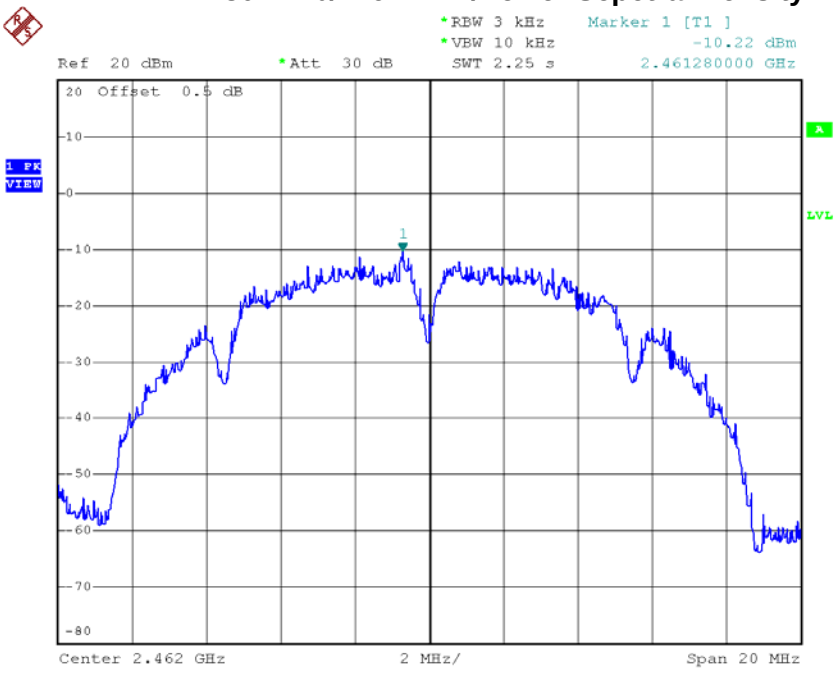


IEEE 802.11b/2437 MHz/Power Sepctral Density



Date: 10.APR.2014 16:24:34

IEEE 802.11b/2462 MHz/Power Sepctral Density

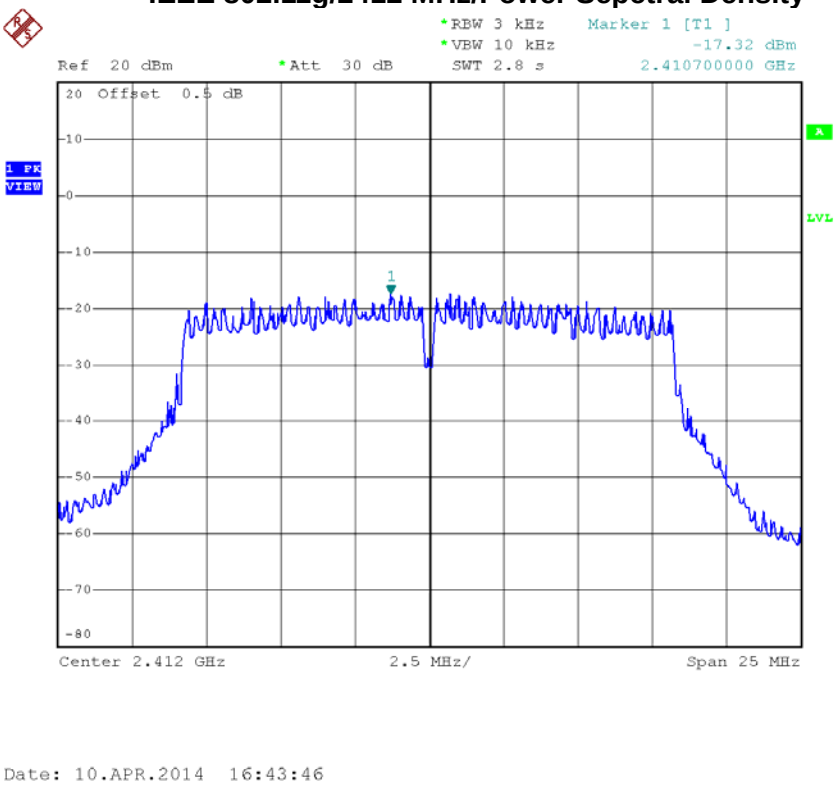


Date: 10.APR.2014 16:27:09

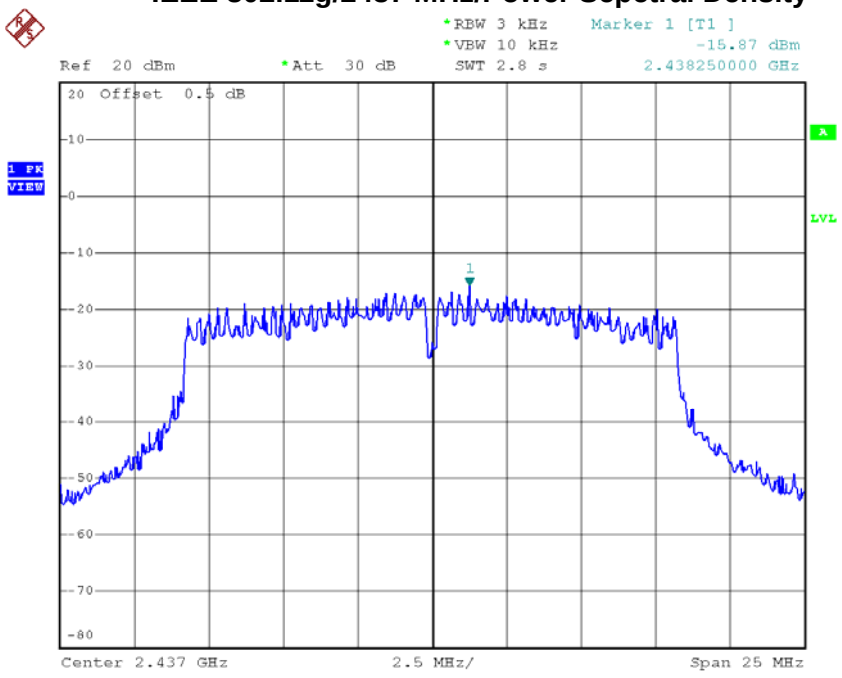
EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-17.32	8	PASS
2437 MHz	-15.87	8	PASS
2462 MHz	-15.09	8	PASS

IEEE 802.11g/2412 MHz/Power Sepctral Density

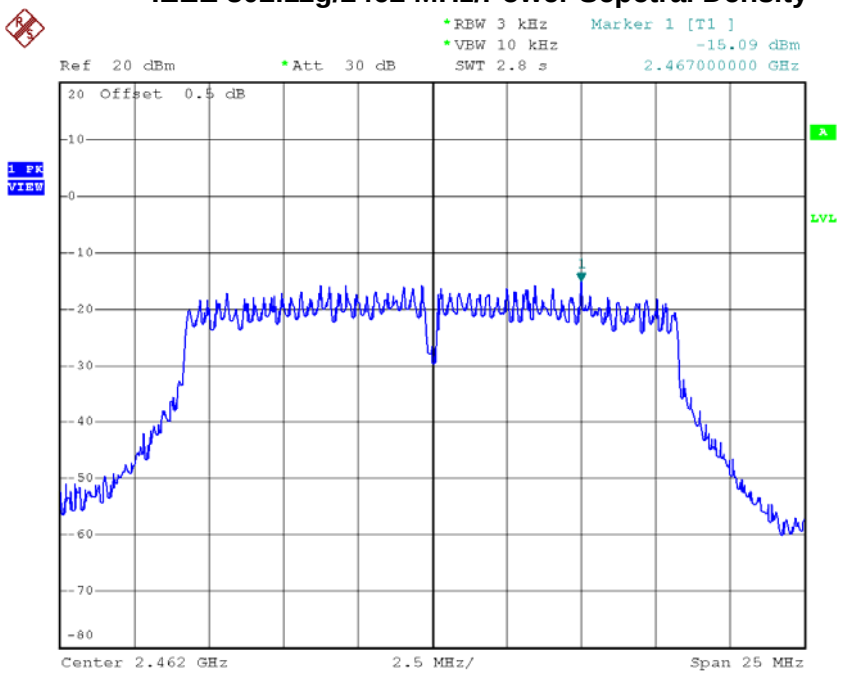


IEEE 802.11g/2437 MHz/Power Sepctral Density



Date: 10.APR.2014 16:47:45

IEEE 802.11g/2462 MHz/Power Sepctral Density

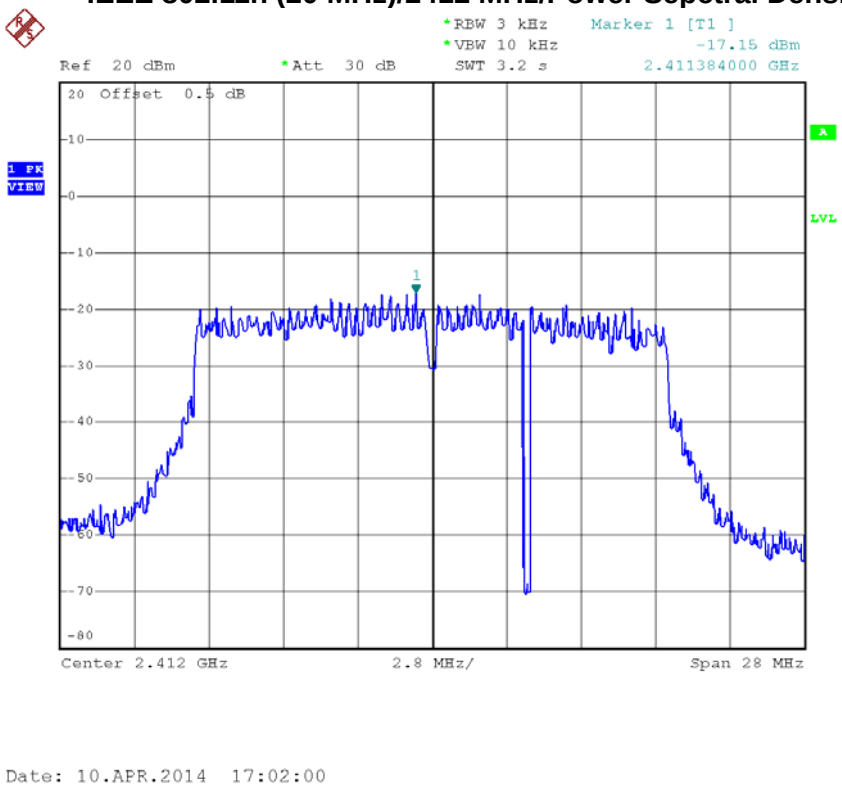


Date: 10.APR.2014 16:50:31

EUT	Mobile Computer	Model Name	9700
Temperature	26°C	Relative Humidity	60%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz		

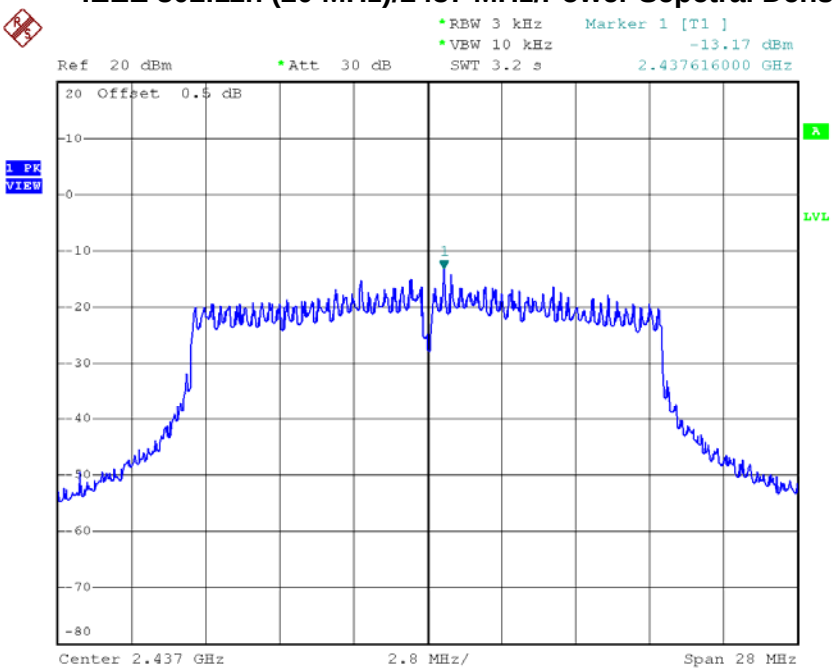
Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-17.15	8	PASS
2437 MHz	-13.17	8	PASS
2462 MHz	-15.22	8	PASS

IEEE 802.11n (20 MHz)/2412 MHz/Power Sepctral Density



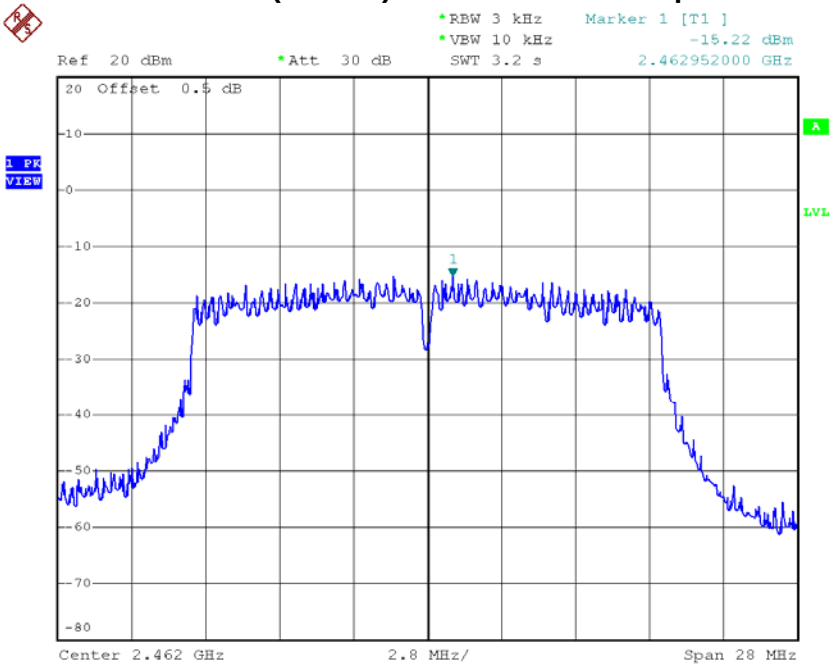
Date: 10.APR.2014 17:02:00

IEEE 802.11n (20 MHz)/2437 MHz/Power Sepctral Density



Date: 10.APR.2014 17:07:50

IEEE 802.11n (20 MHz)/2462 MHz/Power Sepctral Density



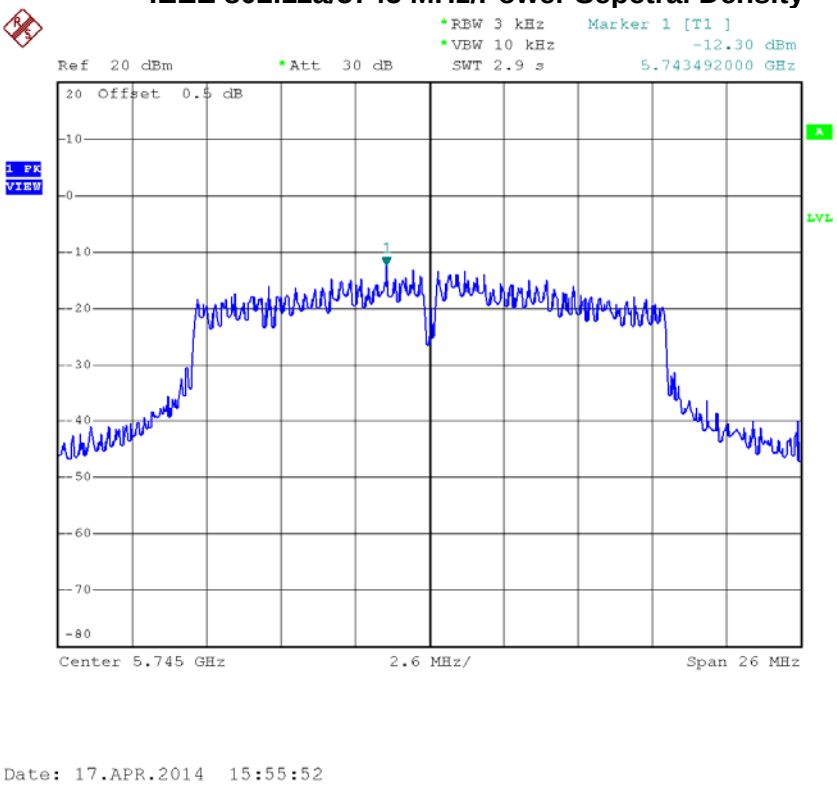
Date: 10.APR.2014 17:11:42

10.8TEST RESULTS - 5745-5825 MHZ

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11a/5745 MHz, 5785 MHz, 5825 MHz		

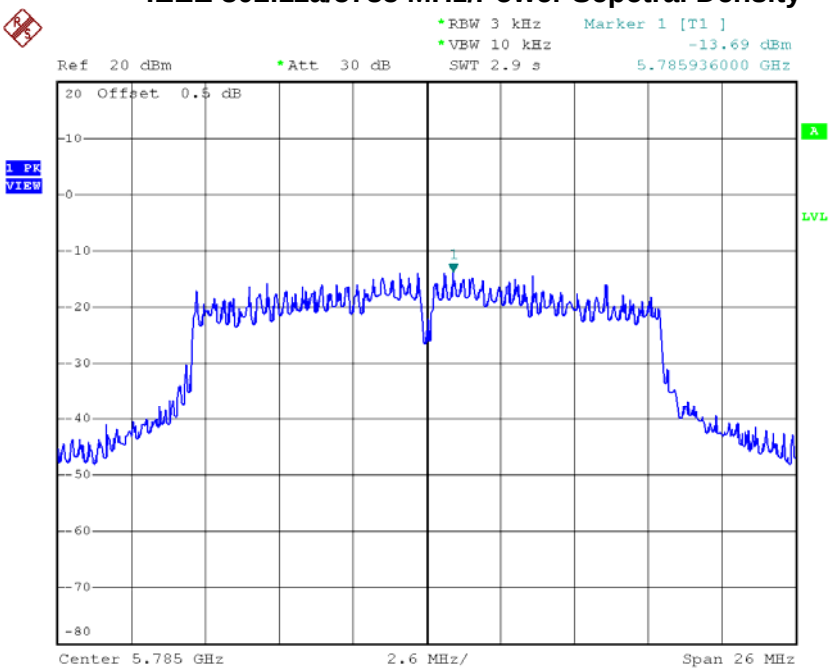
Frequency	Power Density (dBm)	Limit (dBm)	Result
5745 MHz	-12.30	8	PASS
5785 MHz	-13.69	8	PASS
5825 MHz	-13.66	8	PASS

IEEE 802.11a/5745 MHz/Power Sepctral Density



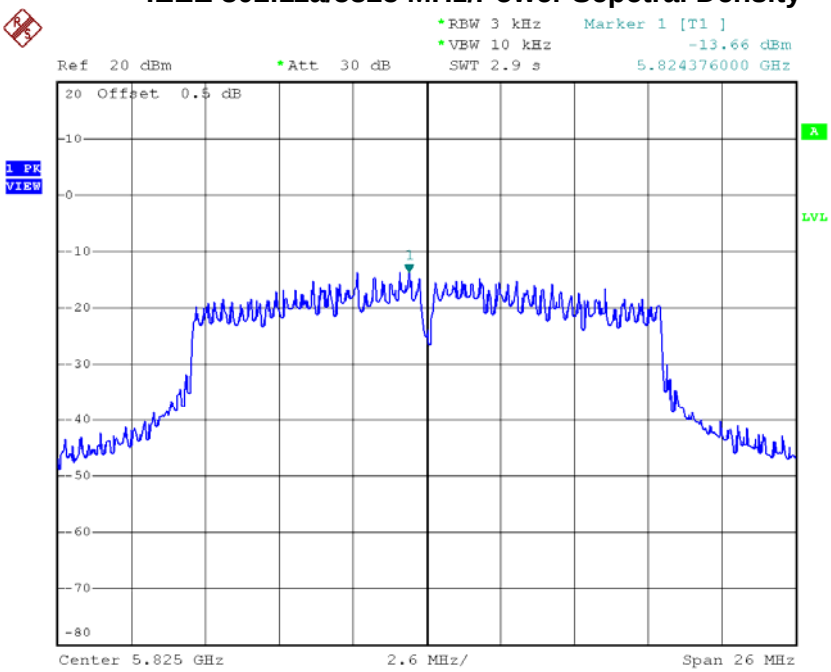
Date: 17.APR.2014 15:55:52

IEEE 802.11a/5785 MHz/Power Sepctral Density



Date: 17.APR.2014 15:57:01

IEEE 802.11a/5825 MHz/Power Sepctral Density

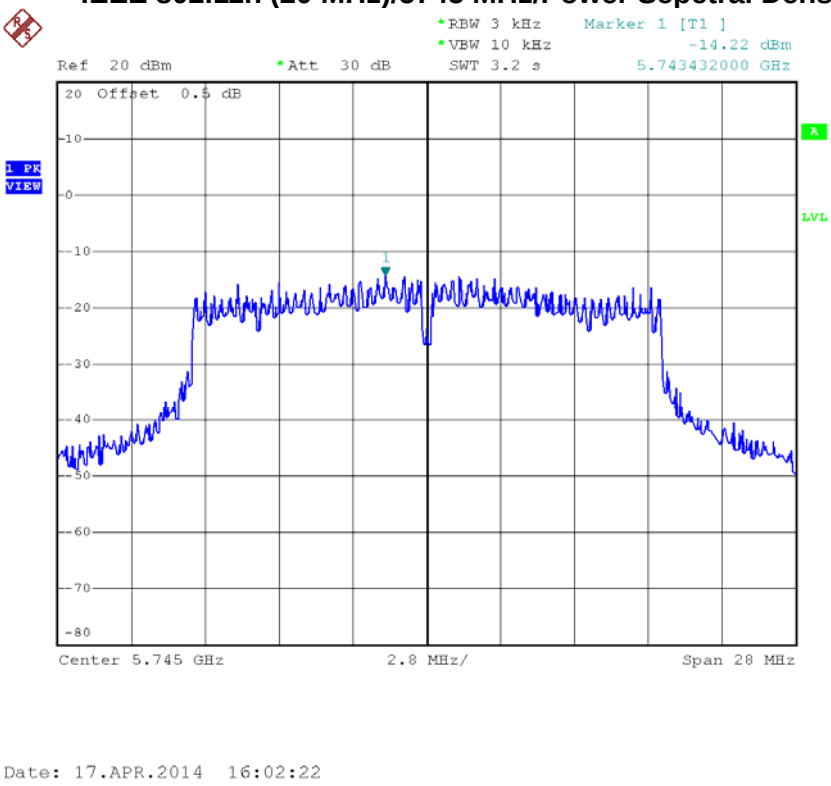


Date: 17.APR.2014 15:58:02

EUT	Mobile Computer	Model Name	9700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/5745 MHz, 5785 MHz, 5825 MHz		

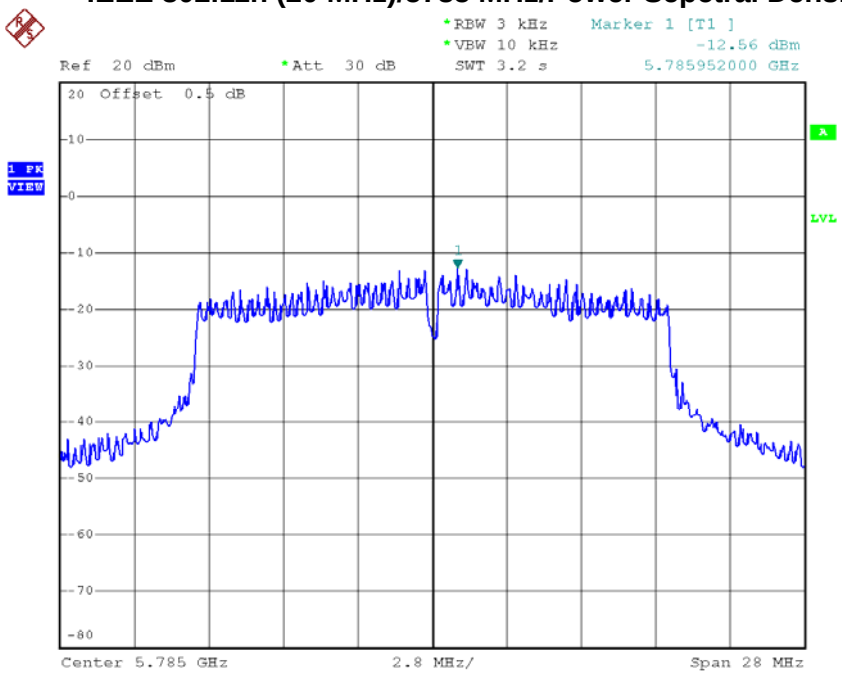
Frequency	Power Density (dBm)	Limit (dBm)	Result
5745 MHz	-14.22	8	PASS
5785 MHz	-12.56	8	PASS
5825 MHz	-14.05	8	PASS

IEEE 802.11n (20 MHz)/5745 MHz/Power Sepctral Density



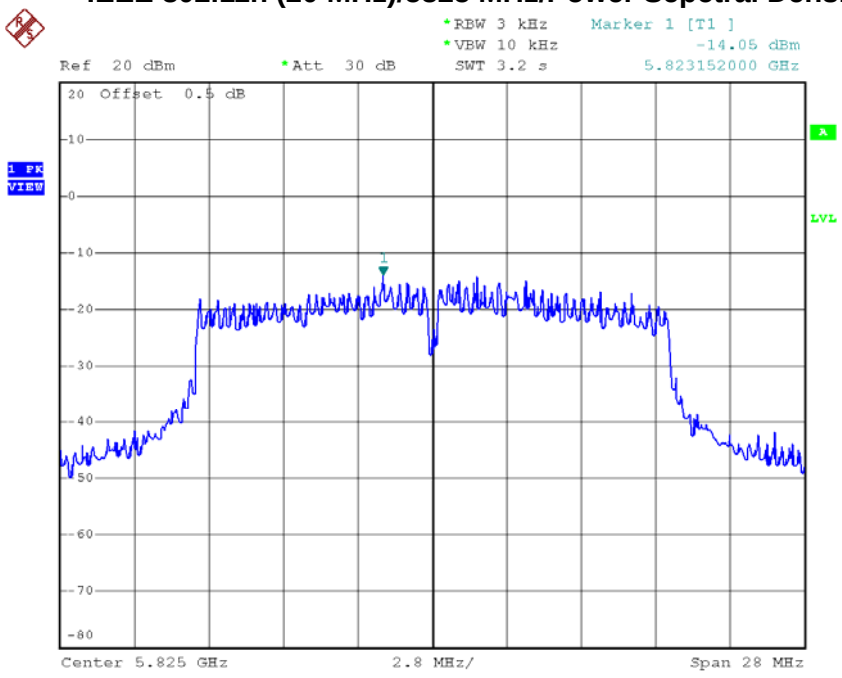
Date: 17.APR.2014 16:02:22

IEEE 802.11n (20 MHz)/5785 MHz/Power Sepctral Density



Date: 17.APR.2014 16:07:23

IEEE 802.11n (20 MHz)/5825 MHz/Power Sepctral Density



Date: 17.APR.2014 16:08:54

11 EUT TEST PHOTO

Conducted emission test photos

Radiated spurious emission test photos