Radio Test Report

FCC ID: HLEMT700NF

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

Issued Date : Feb. 25, 2014
Project No. : 1311157
Equipment : Multi-functional T&A Terminal
Model Name : MT700

Applicant : unitech electronics co., ltd.
Address : 5F, No. 136, Lane 235, Pao-Chiao Rd.,
Hsin-Tien Dist., New Taipei City, Taiwan

Tested by: Neutron Engineering Inc. EMC Laboratory
Date of Receipt: Jan. 03, 2014
Date of Test: Jan. 03, 2014 ~ Feb. 24, 2014

Testing Engineer : (Josh Lin)

Technical Manager : (Jeff Yang)

Authorized Signatory : (Andy Chiu)

Neutron Engineering Inc.
B1, No. 37, Lane 365, YangGuang St.,
NeiHu District 114, Taipei, Taiwan.
TEL: +886-2-2657-3299
FAX: +886-2-2657-3331

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.**

Neutron's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **Neutron** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **Neutron** issued reports.

Neutron's reports must not be used by the client to claim product endorsement by the authorities or any agency of the Government.

This report is the confidential property of the client. As a mutual protection to the clients, the public and **Neutron-self**, extracts from the test report shall not be reproduced except in full with **Neutron**'s authorized written approval.

Neutron's laboratory quality assurance procedures are in compliance with the **ISO Guide 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

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

REPORT ISSUED HISTORY

Revised Version No.	Description	Issued Date
NEI-FCCP-1-1311157	Original Issue.	Feb. 25, 2014

1 CERTIFICATION

Equipment	:	Multi-functional T&A Terminal
Brand Name	:	unitech; TASHI
Model Name	:	MT700
Applicant	:	unitech electronics co., ltd.
Date of Test	:	Jan. 03, 2014 ~ Feb. 24, 2014
Standards	:	FCC Part 15, Subpart C: 2012 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-1-1311157) 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

FCC Part 15, Subpart C: 2012		
Standard Clause	**Test Item**	**Result**
15.207	Conducted Emission	**PASS**
15.247 (c)	Antenna conducted Spurious Emission	**PASS**
15.247 (a)(2)	6 dB 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

2.1 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/Industry Canada 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

<table>
<tr><td>Equipment</td><td>Multi-functional T&A Terminal</td></tr>
<tr><td>Brand Name</td><td>unitech; TASHI</td></tr>
<tr><td>Model Name</td><td>MT700</td></tr>
<tr><td>OEM Brand/Model Name</td><td>N/A</td></tr>
<tr><td>Model Difference</td><td>N/A</td></tr>
<tr><td>Product Description</td><td>The EUT is a Multi-functional T&A Terminal.
<table>
<tr><td>Operation Frequency</td><td>2412~2462 MHz</td></tr>
<tr><td>Modulation Type</td><td>DBPSK, DQPSK, CCK, BPSK, QPSK, 16QAM, 64QAM, MIMO
2412~2462 MHz:
IEEE 802.11b: DSSS
IEEE 802.11g: OFDM
IEEE 802.11n: OFDM</td></tr>
<tr><td>Bit Rate of Transmitter</td><td>IEEE 802.11b: 1, 2, 5.5 and 11 Mbps
IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
IEEE 802.11n: HT20: 130 Mbps (max.)</td></tr>
<tr><td>Number Of Channel</td><td>Please refer to the Note 2.</td></tr>
<tr><td>Antenna Designation</td><td>Please refer to the Note 3.</td></tr>
<tr><td>Antenna Gain(Peak)</td><td>Please refer to the Note 3.</td></tr>
<tr><td>Maximum Conducted Output Power</td><td>Peak Output Power:
IEEE 802.11b/g: 22.03 dBm (0.1596 W)
IEEE 802.11n (20 MHz): 22.07 dBm (0.1611 W)</td></tr>
</table>
More details of EUT technical specification, please refer to the User's Manual.</td></tr>
<tr><td>Power Source</td><td>#1 DC Voltage supplied from External Power Supply.
#2 Battery supplied.</td></tr>
<tr><td>Power Rating</td><td>#1 Sunny, SYS1319-2412-T3
I/P: AC 100-240V 1.0A MAX 50-60Hz / O/P: DC +12V 2.0A 24W MAX.
#2 Li-ion Battery Pack: HUT-4010G 2600mAh</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the User's Manual</td></tr>
<tr><td>Products Covered</td><td>1 * WLAN Module
1 * RFID Module: MP-1301NFC
1 * RFID Antenna: A684268-1D0
1 * Fingerprinter (optional)</td></tr>
<tr><td>EUT Modification(s)</td><td>N/A</td></tr>
</table>

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		

3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	Joymax Electronics Co., Ltd.	IFF-3105IPXX-763	PIFA	I-PEX	2.50

4. The EUT incorporates MIMO function. Physically, the EUT provides two completed transmitters and two receivers.

2412-2462 MHz Band	
Modulated type	TX Function
IEEE 802.11b	1 TX
IEEE 802.11g	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.

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)	802.11b	DSSS	1 Mbps	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	01/11	
	802.11g	OFDM	6 Mbps	01/11	
	802.11n (20 MHz)	BPSK	MCS0	01/11	
Antenna Requirement	---		---	---	

NOTE: The measurements are performed at the highest, middle, lowest available channels.

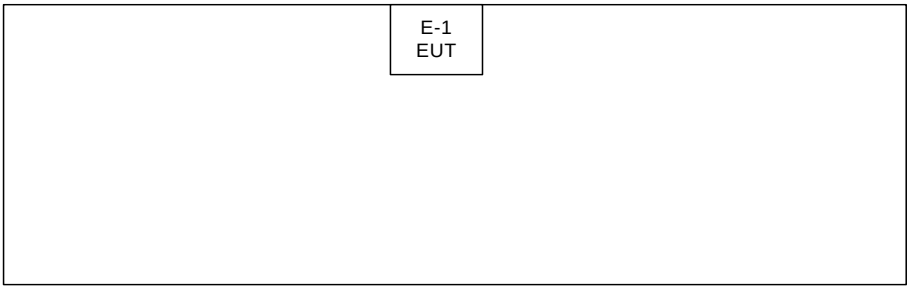
3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

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.

IEEE	802.11b			802.11g		
Test software Version	SRU V3.03.10.00			SRU V3.03.10.00		
Frequency	2412 MHz	2437 MHz	2462 MHz	2412 MHz	2437 MHz	2462 MHz
Parameter	70	70	70	70	70	70

IEEE	802.11n (20 MHz)		
Test software Version	SRU V3.03.10.00		
Frequency	2412 MHz	2437 MHz	2462 MHz
Parameter	70	70	70

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	Multi-functional T&A Terminal	unitech; TASHI	MT700	HLEMT700NF	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	Feb. 24, 2014
2	Test Cable	TIMES	CFD300-NL	C01	Jun. 16, 2014
3	EMI Test Receiver	Agilent	N9038A	MY51210215	Mar. 21, 2014
4	Measurement Software	EZ	EZ_EMC (Version NB-02A)	N/A	N/A

NOTE: **N/A**: denotes No Model Name, No Serial No. or No Calibration specified.

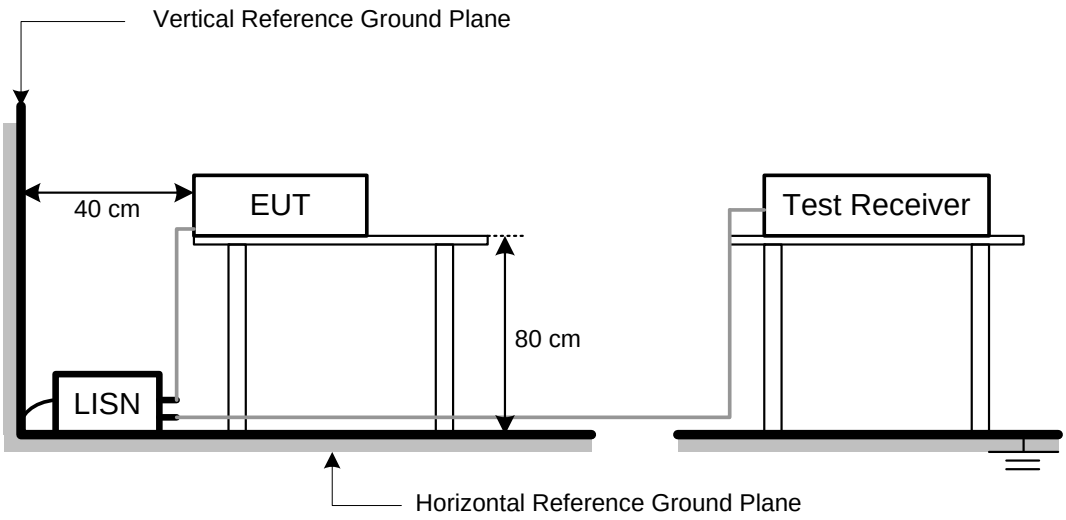
4.3 TEST PROCEDURES

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

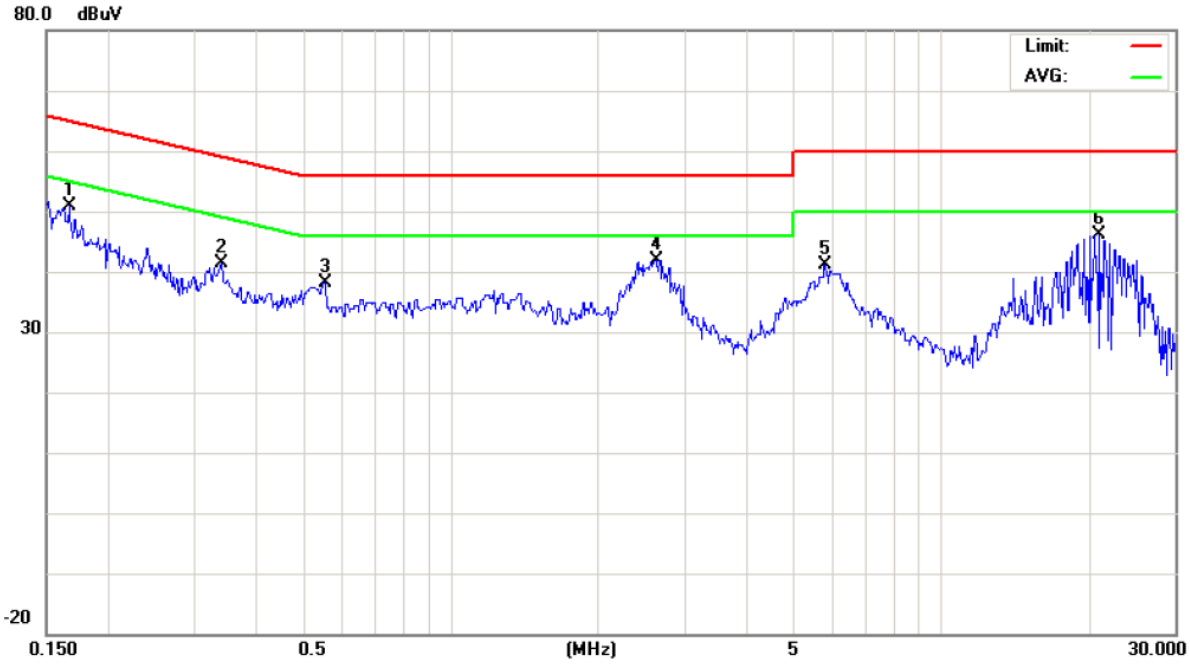
4.6 EUT OPERATING CONDITIONS

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

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	24°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

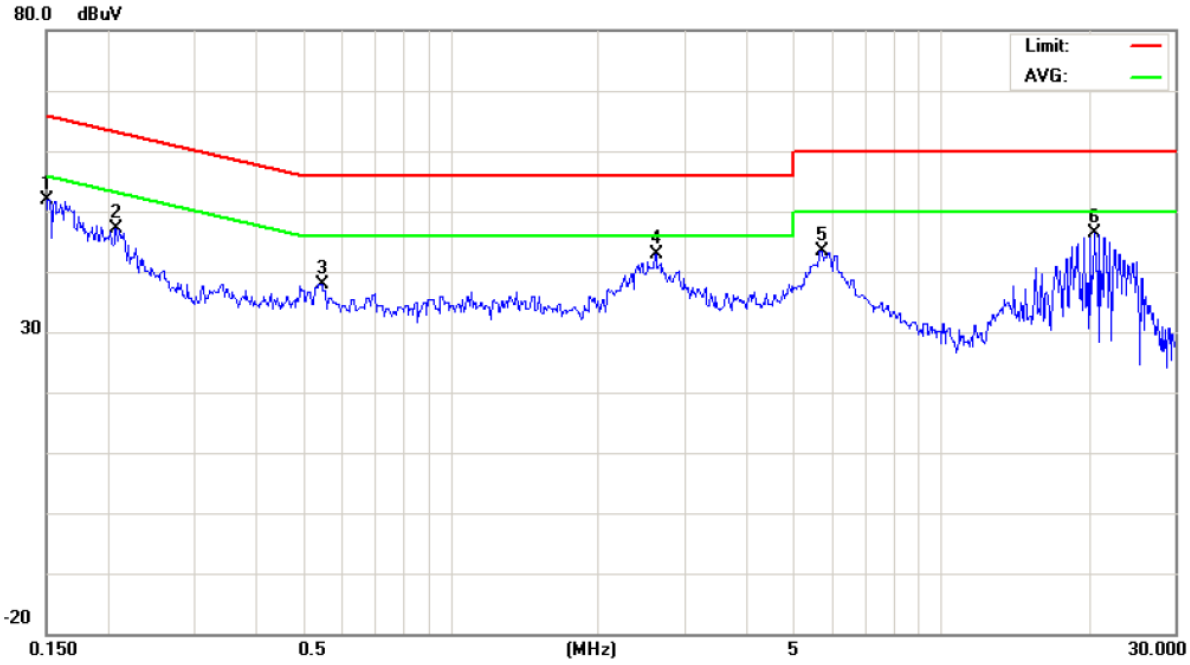
Phase: Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1667	41.82	8.95	50.77	65.12	-14.35	peak	
2		0.3403	33.47	7.81	41.28	59.20	-17.92	peak	
3		0.5540	29.47	8.65	38.12	56.00	-17.88	peak	
4		2.6149	32.56	9.37	41.93	56.00	-14.07	peak	
5		5.8000	31.68	9.49	41.17	60.00	-18.83	peak	
6	*	20.9999	36.49	9.55	46.04	60.00	-13.96	peak	

EUT	Multi-functional T&A Terminal	Model Name	MT700
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		0.1507	43.22	8.71	51.93	65.96	-14.03	peak	
2		0.2073	36.92	10.31	47.23	63.31	-16.08	peak	
3		0.5450	29.28	8.63	37.91	56.00	-18.09	peak	
4	*	2.6149	33.48	9.37	42.85	56.00	-13.15	peak	
5		5.7000	33.80	9.49	43.29	60.00	-16.71	peak	
6		20.4999	36.72	9.56	46.28	60.00	-13.72	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

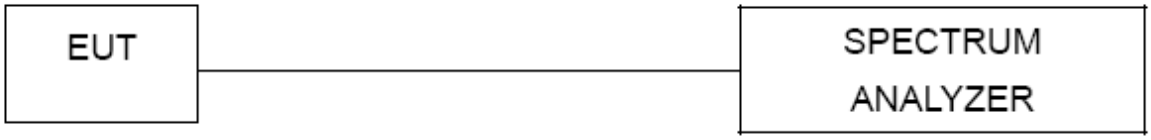
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014

NOTE: **N/A**: denotes No Model Name, 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=100KHz, Sweep time = Auto.

5.4 TEST SETUP LAYOUT



5.5 DEVIATION FROM TEST STANDARD

No deviation

5.6 EUT OPERATING CONDITIONS

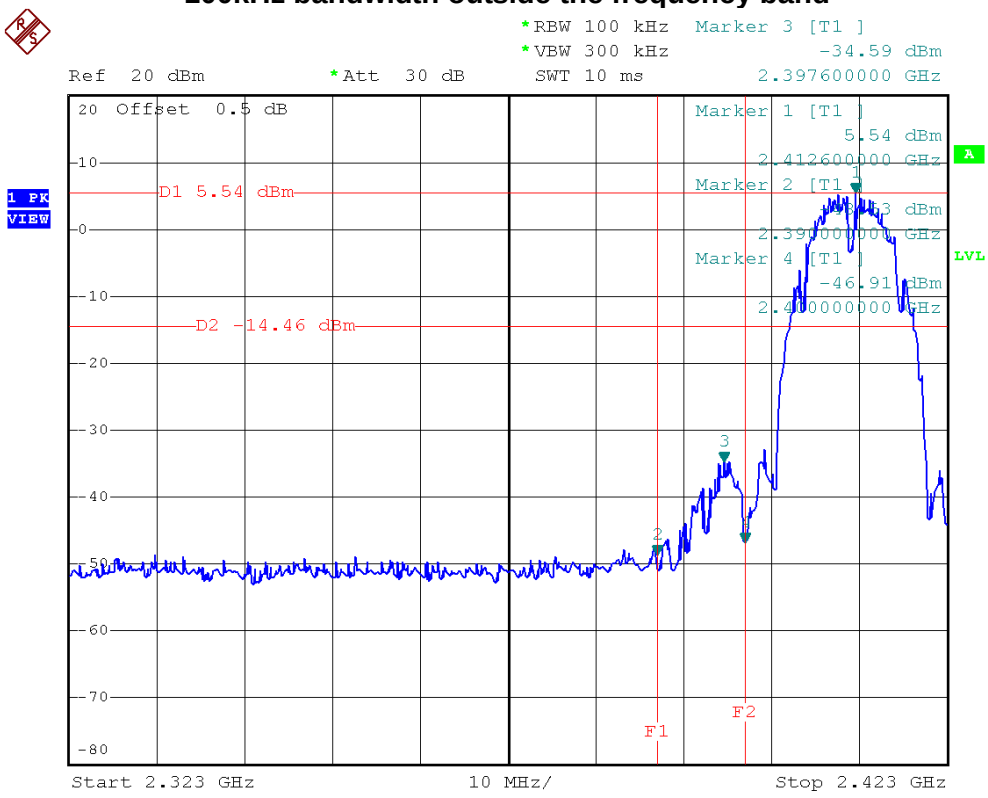
The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing.

5.7 TEST RESULTS

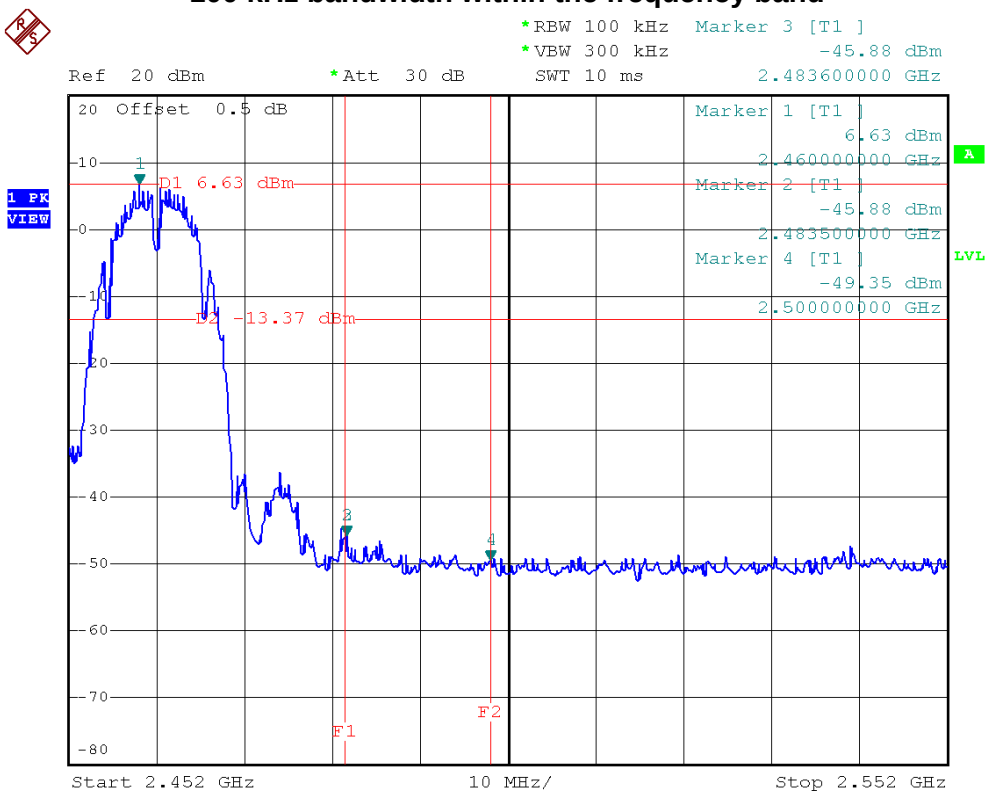
EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b		

Channel of Worst Data			
The max. radio frequency power in any 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)
2397.60	-34.59	2483.60	-45.88
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.			

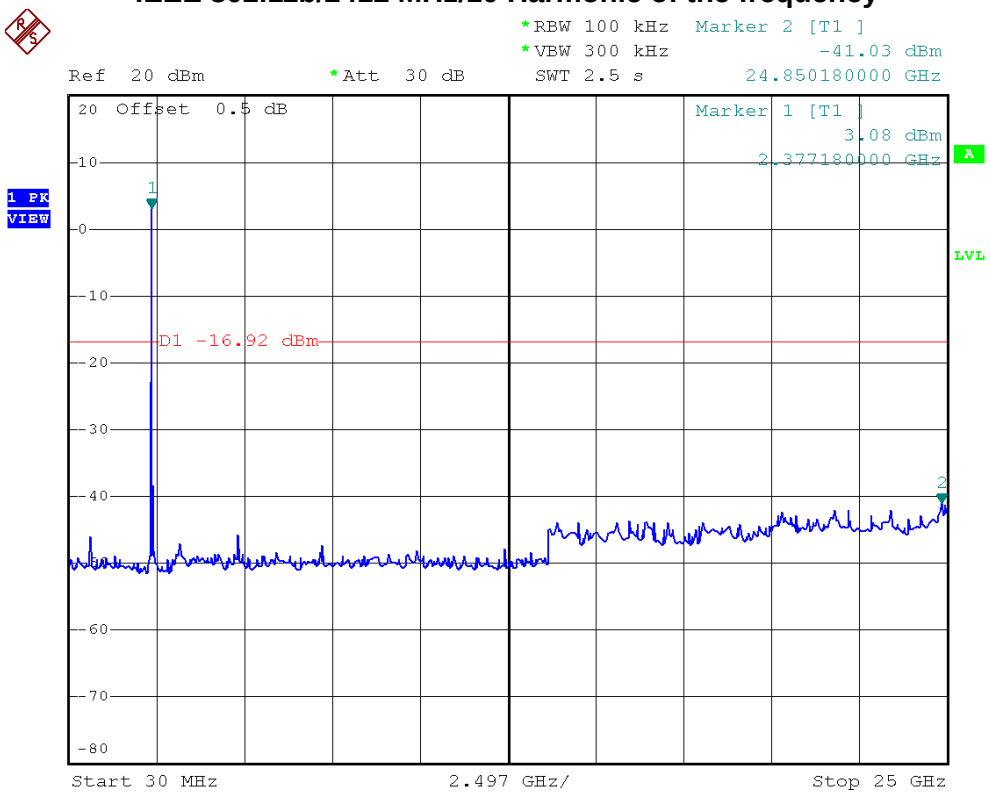
IEEE 802.11b/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



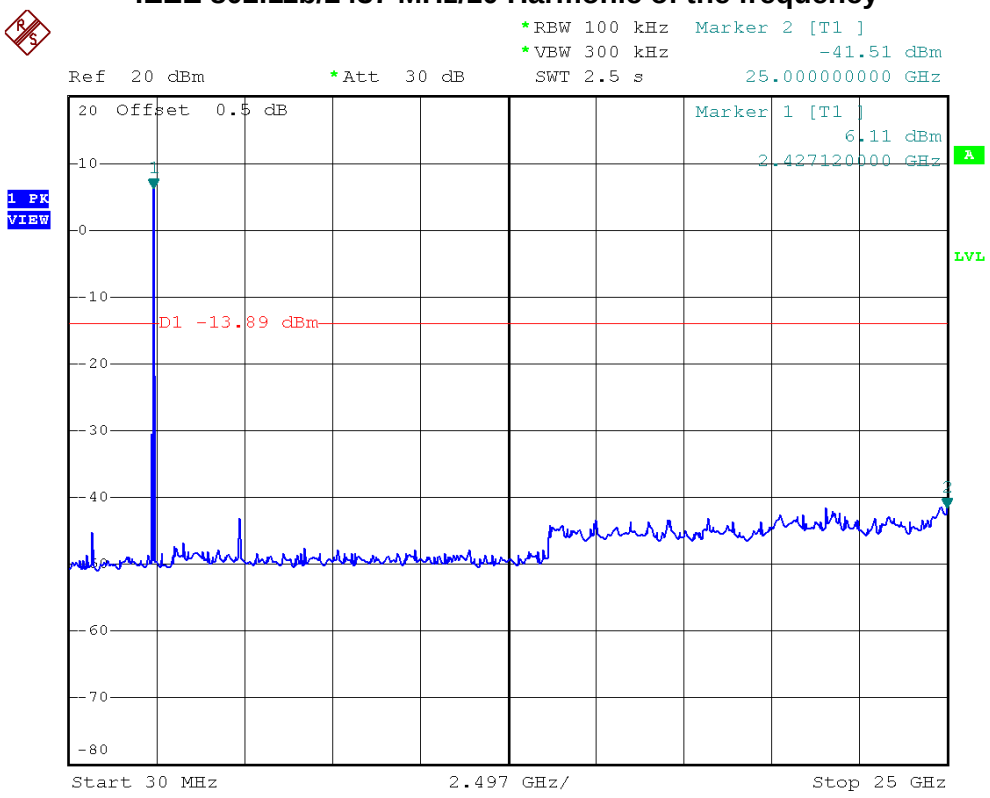
IEEE 802.11b/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



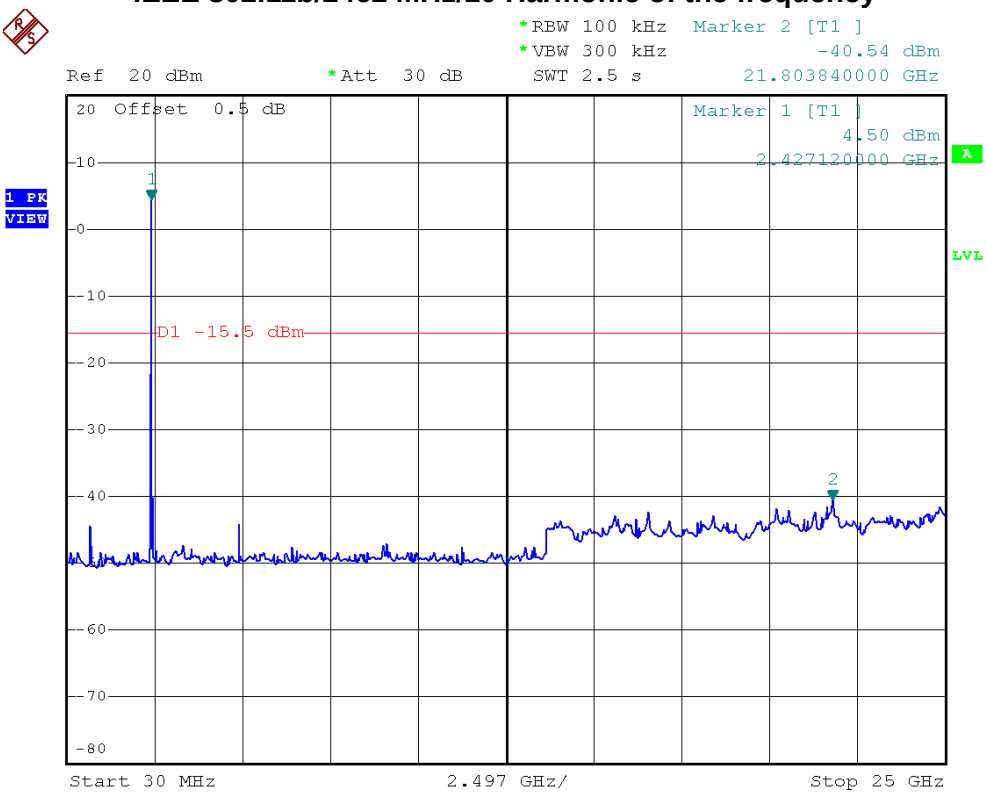
IEEE 802.11b/2412 MHz/10 Harmonic of the frequency



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



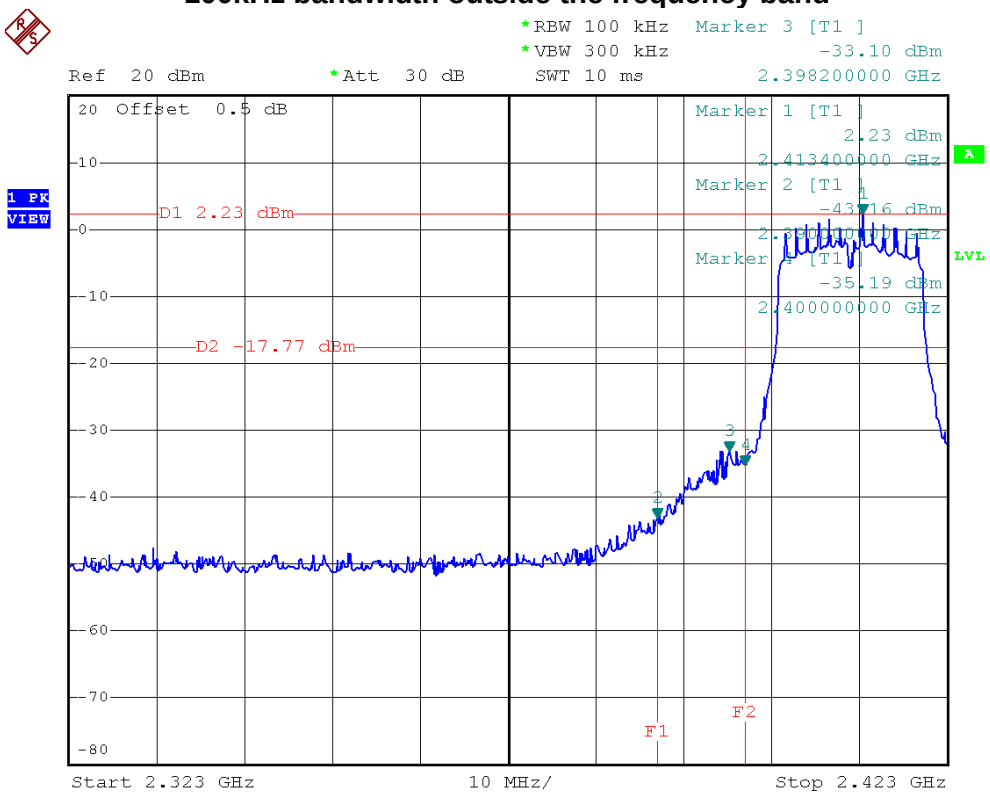
IEEE 802.11b/2462 MHz/10 Harmonic of the frequency



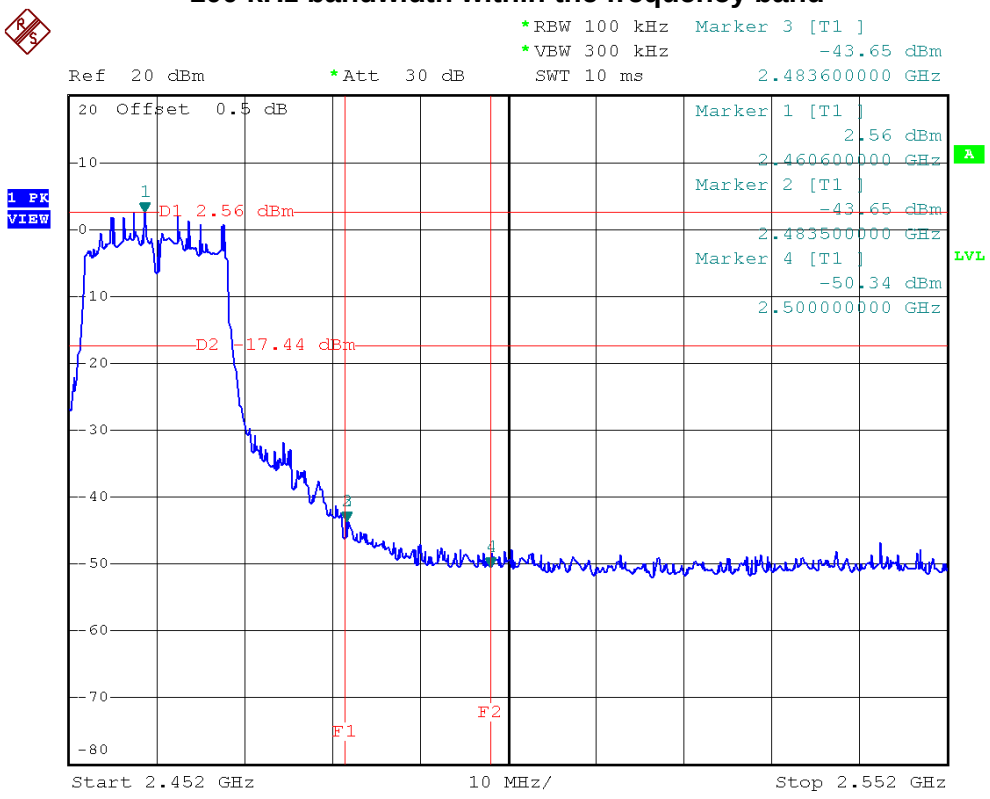
EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g		

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)
2398.20	-33.10	2483.60	-43.65
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.			

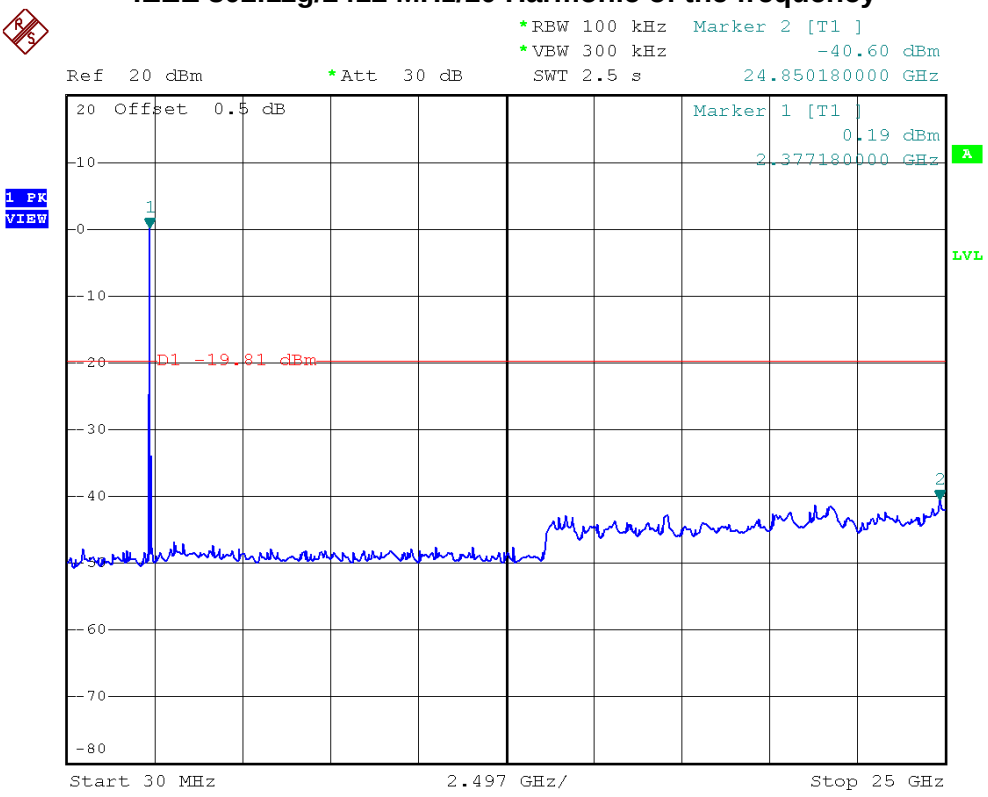
IEEE 802.11g/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



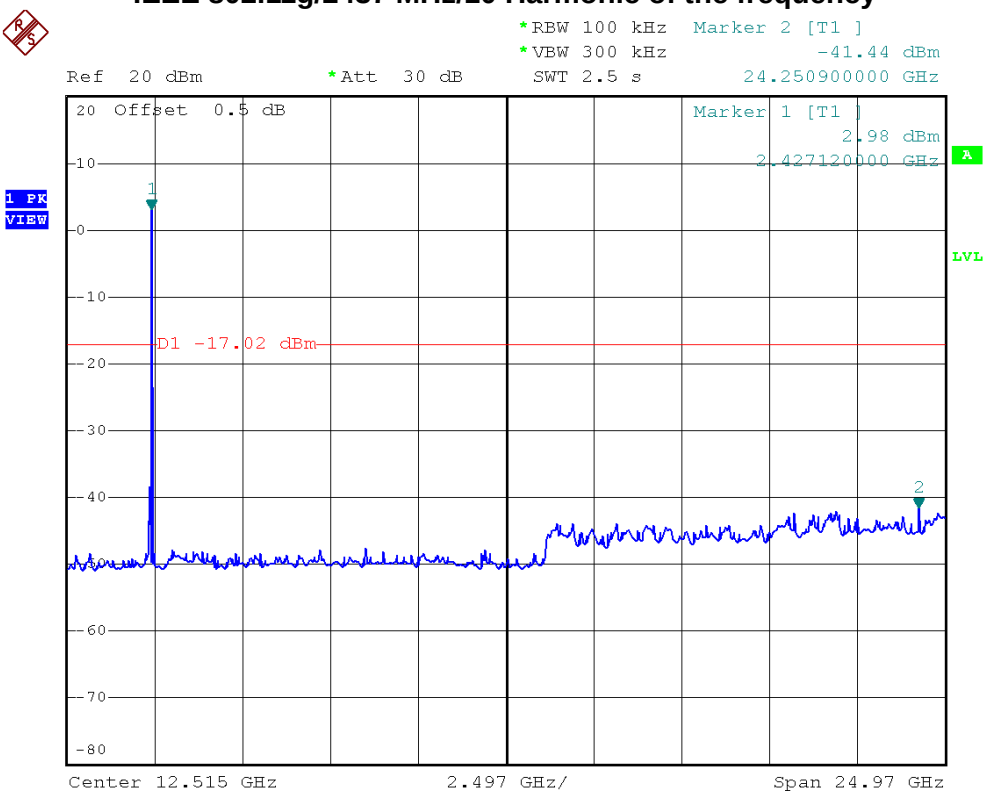
IEEE 802.11g/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



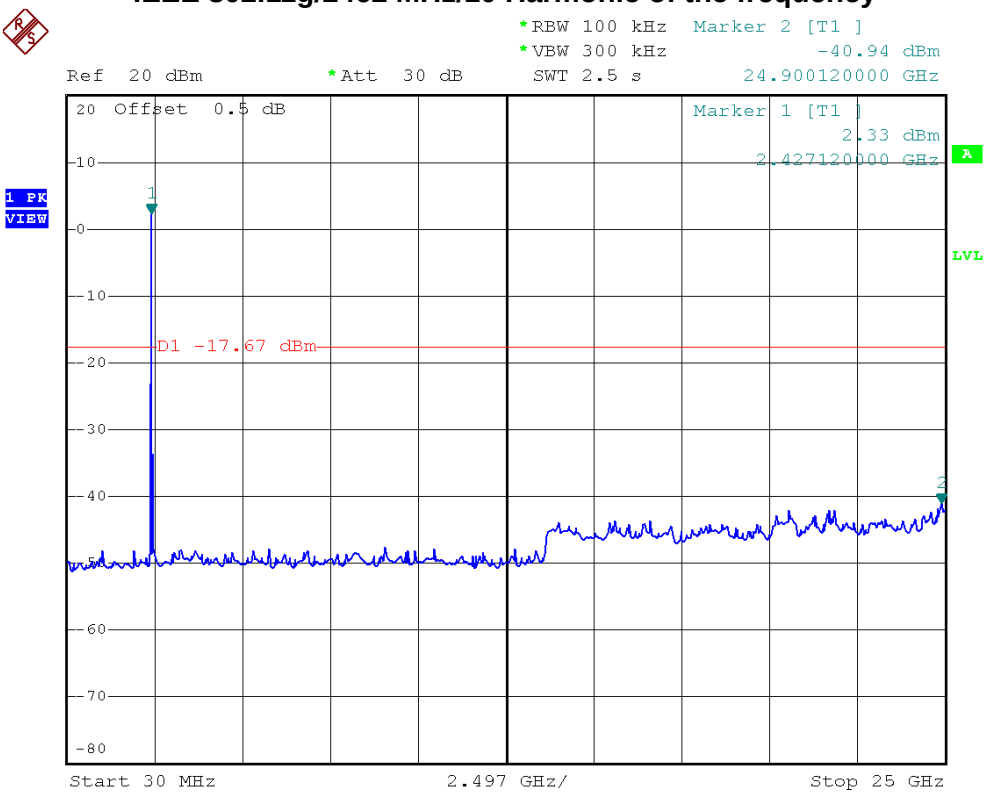
IEEE 802.11g/2412 MHz/10 Harmonic of the frequency



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



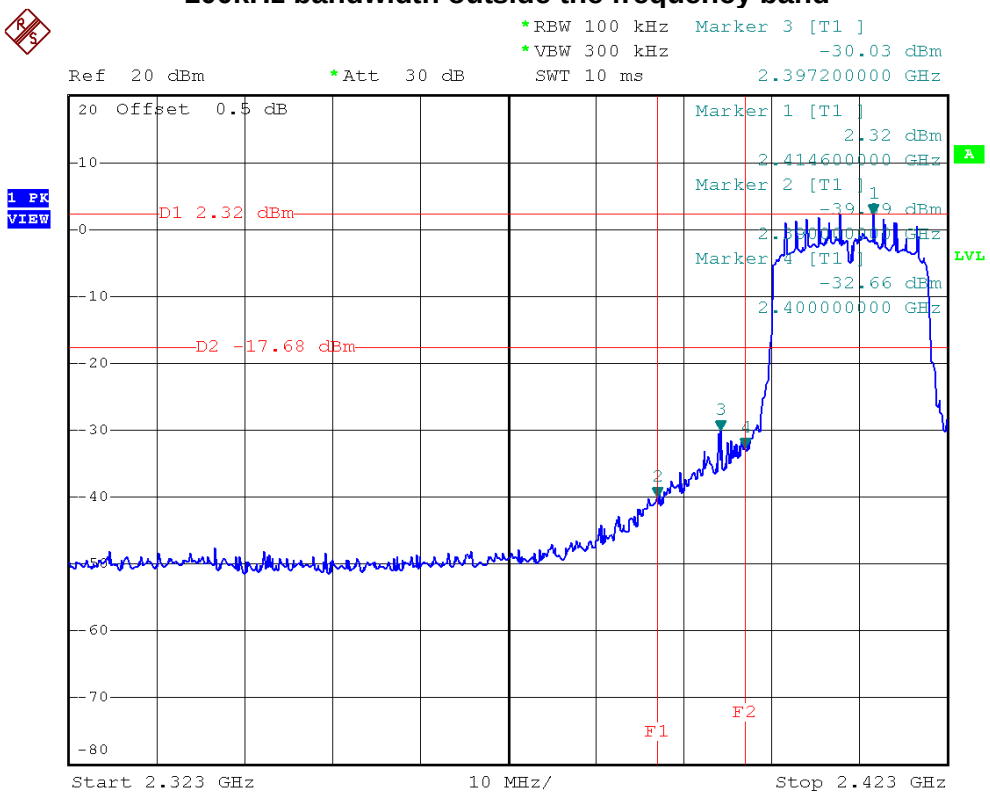
IEEE 802.11g/2462 MHz/10 Harmonic of the frequency



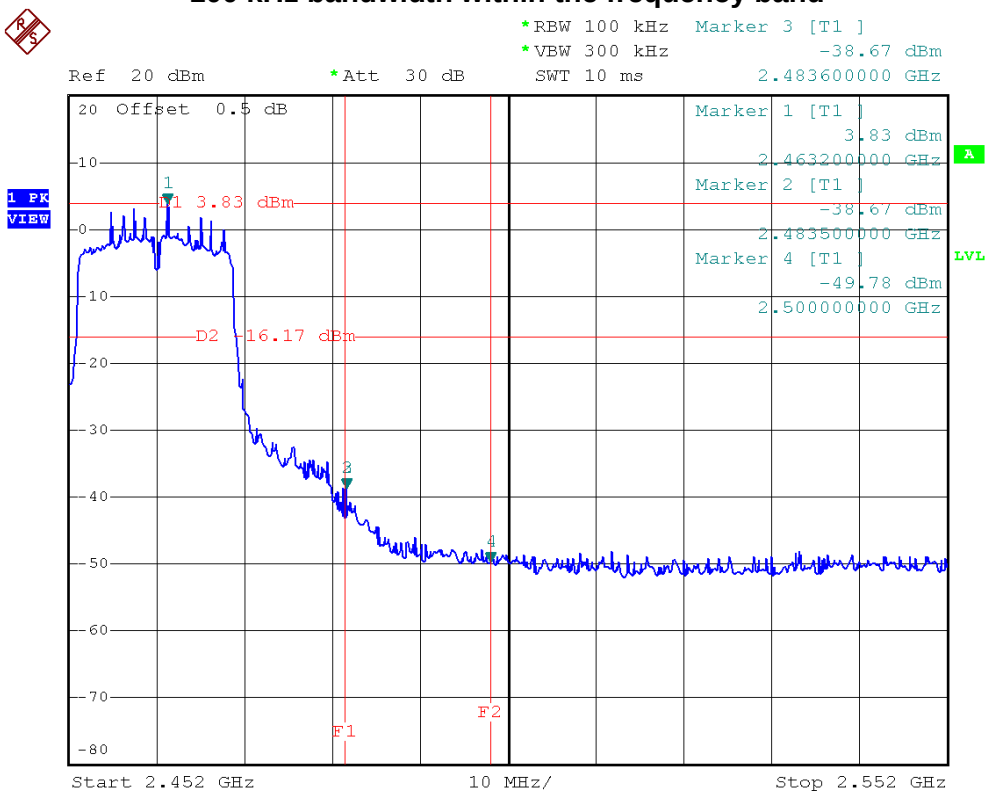
EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)		

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)
2397.20	-30.03	2483.60	-38.67
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.			

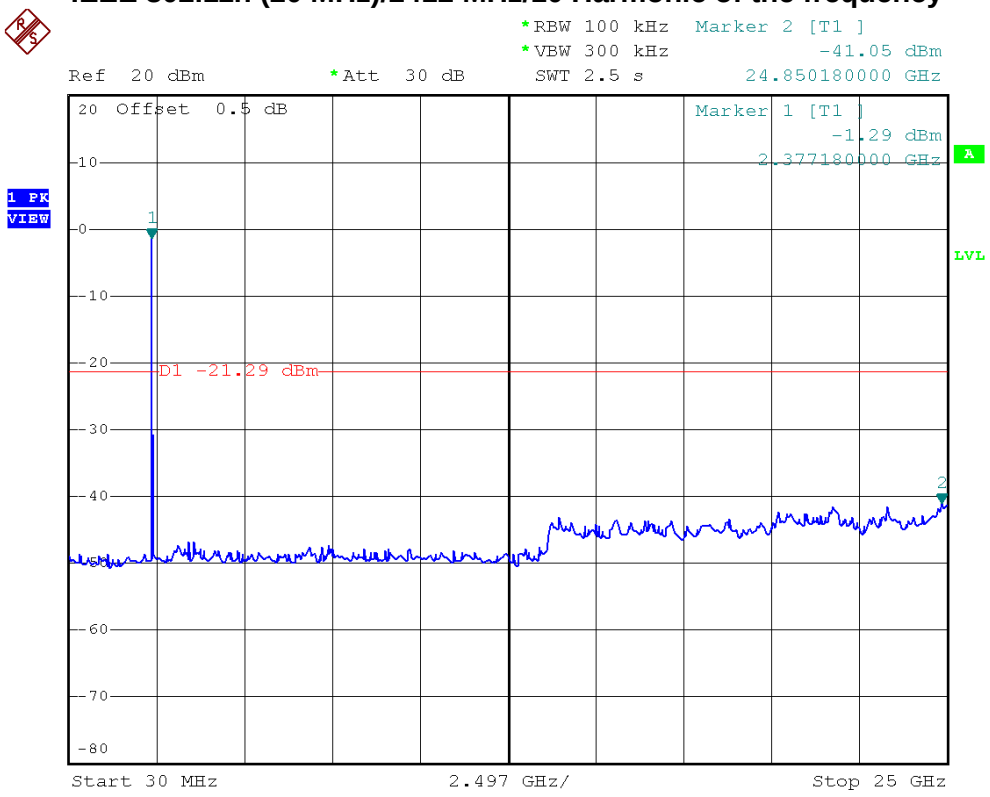
IEEE 802.11n (20 MHz)/The max. radio frequency power in any 100kHz bandwidth outside the frequency band



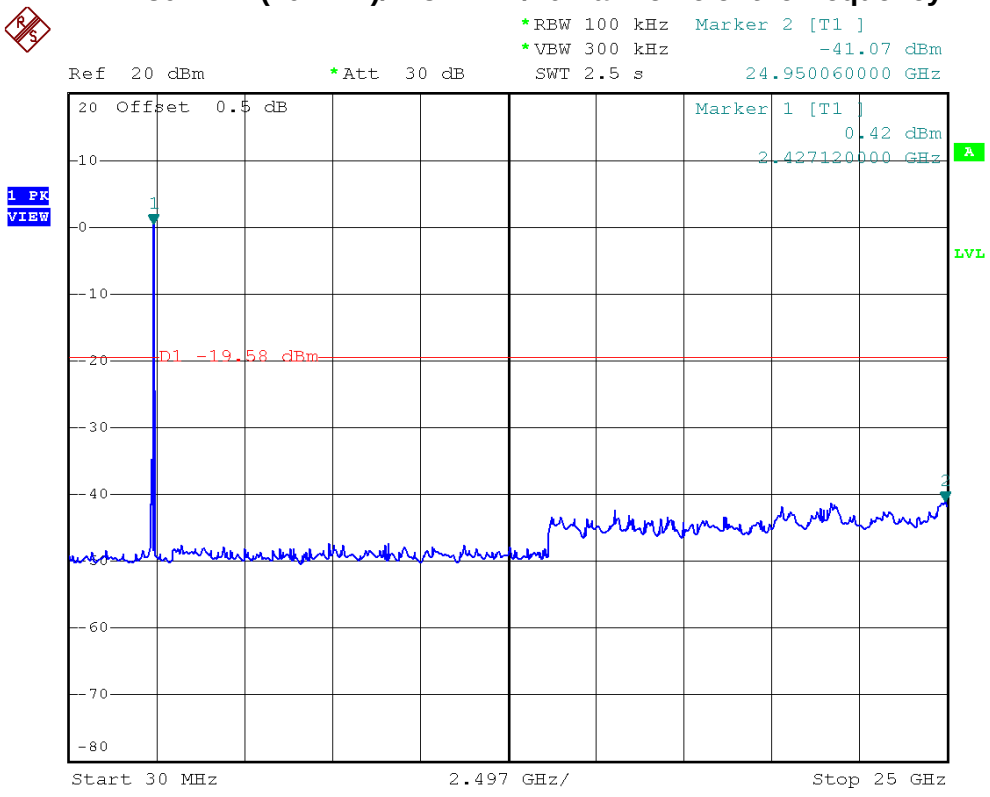
IEEE 802.11n (20 MHz)/The max. radio frequency power in any 100 kHz bandwidth within the frequency band



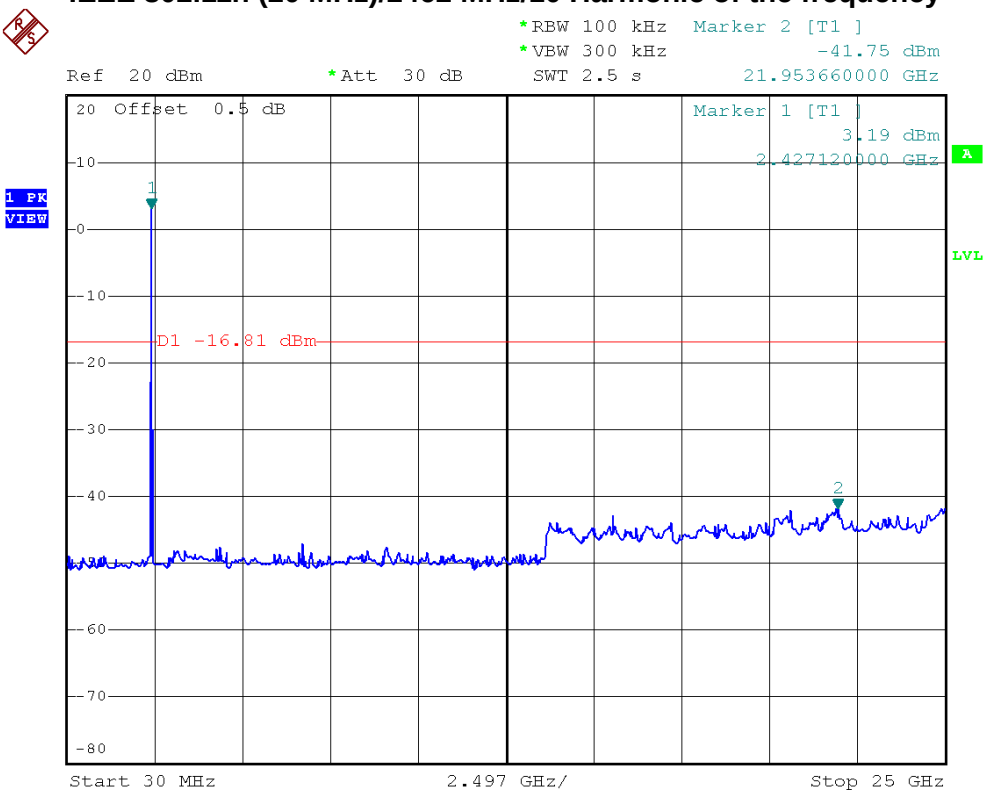
IEEE 802.11n (20 MHz)/2412 MHz/10 Harmonic of the frequency



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



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



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

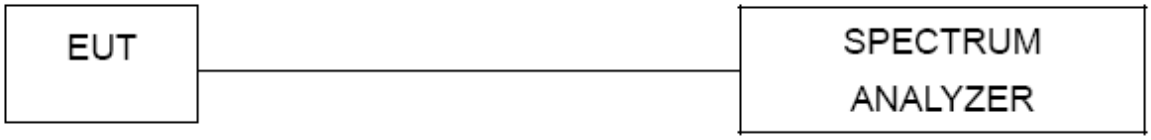
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014

NOTE: **N/A**: denotes No Model Name, 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=100KHz, Sweep time = Auto.

6.4 TEST SETUP LAYOUT



6.5 DEVIATION FROM TEST STANDARD

No deviation

6.6 EUT OPERATING CONDITIONS

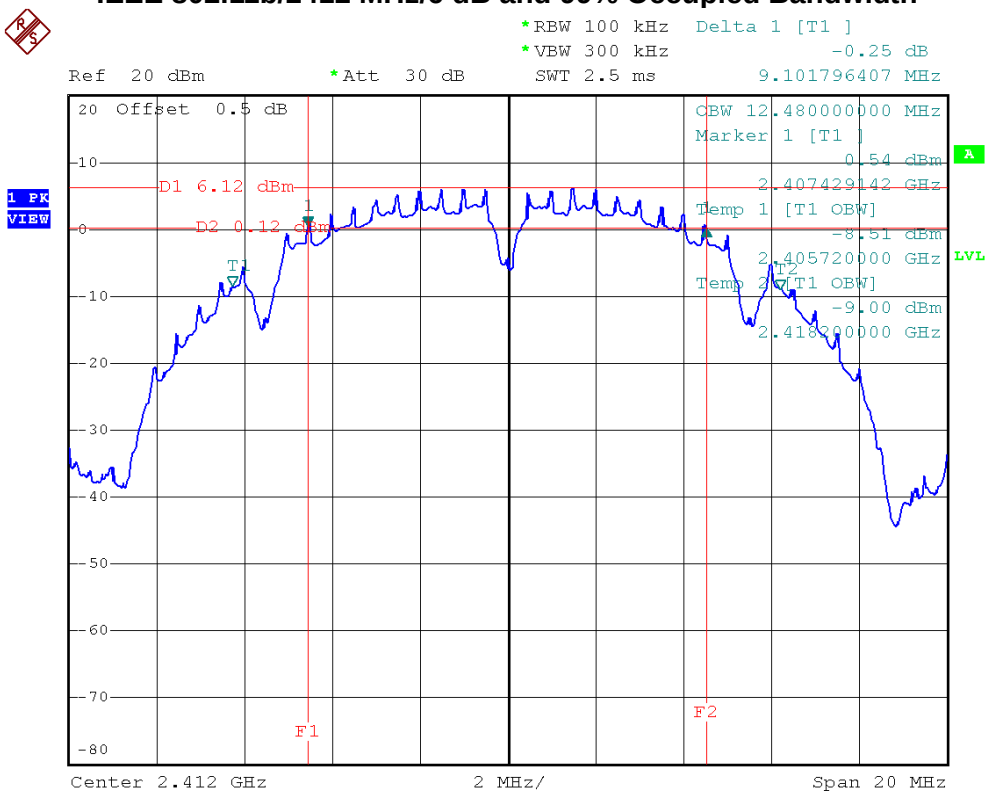
The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing.

6.7 TEST RESULTS

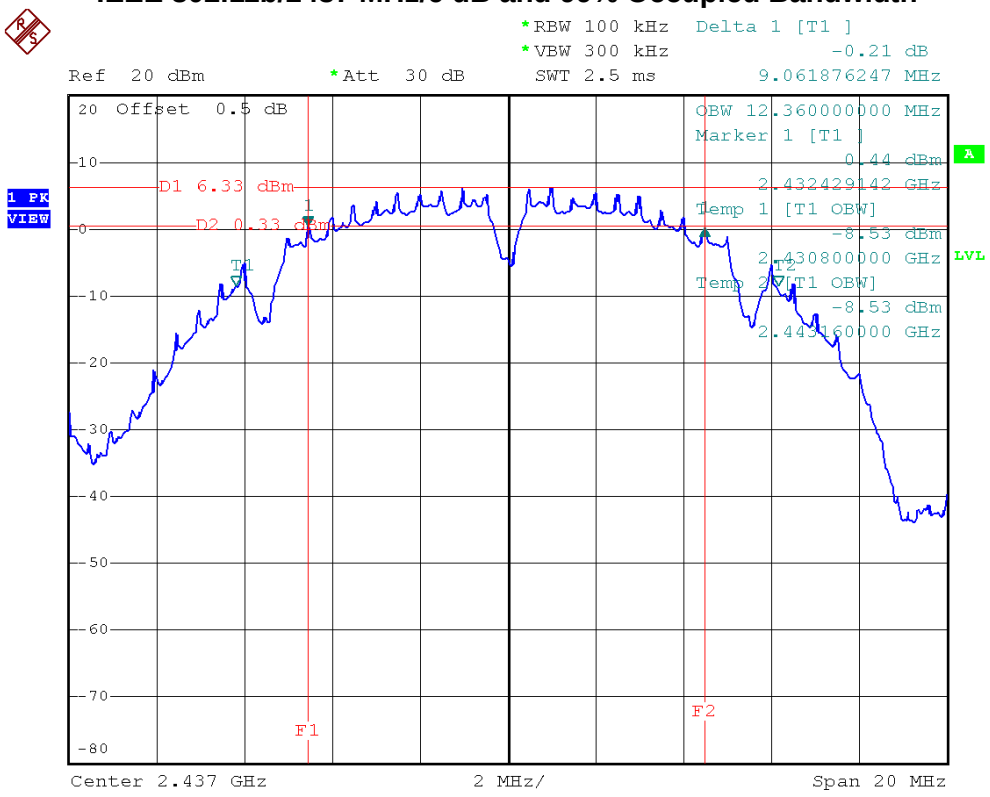
EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
2412 MHz	9.10	12.48	>=500 kHz	PASS
2437 MHz	9.06	12.36	>=500 kHz	PASS
2462 MHz	9.02	12.44	>=500 kHz	PASS

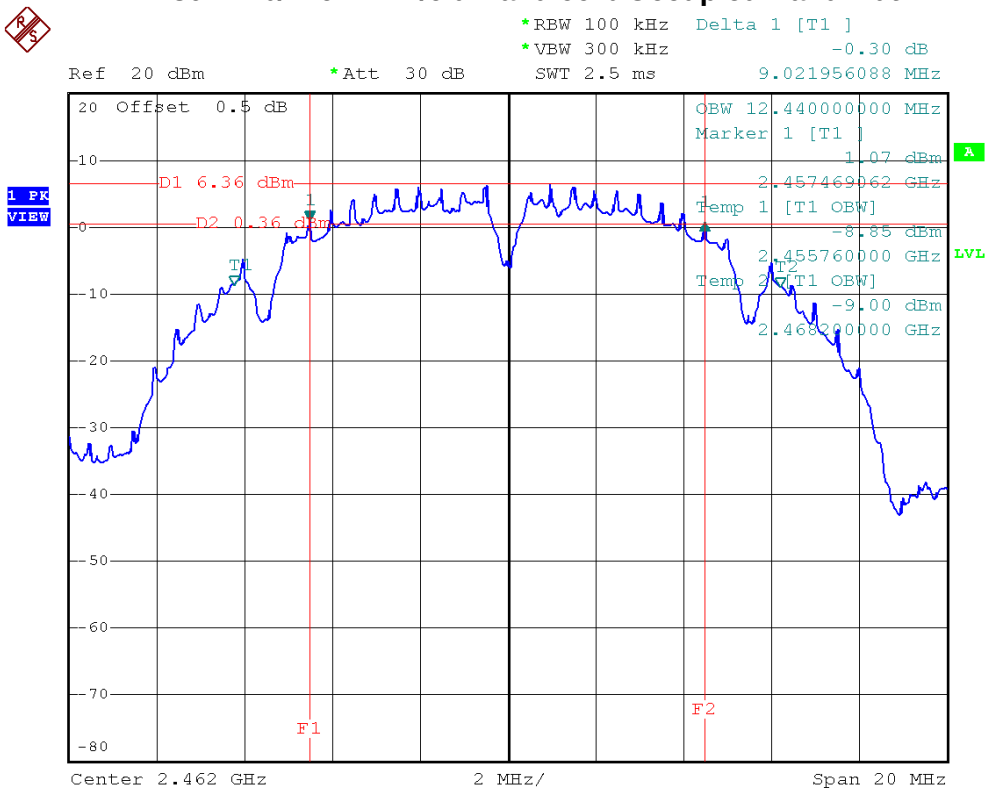
IEEE 802.11b/2412 MHz/6 dB and 99% Occupied Bandwidth



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



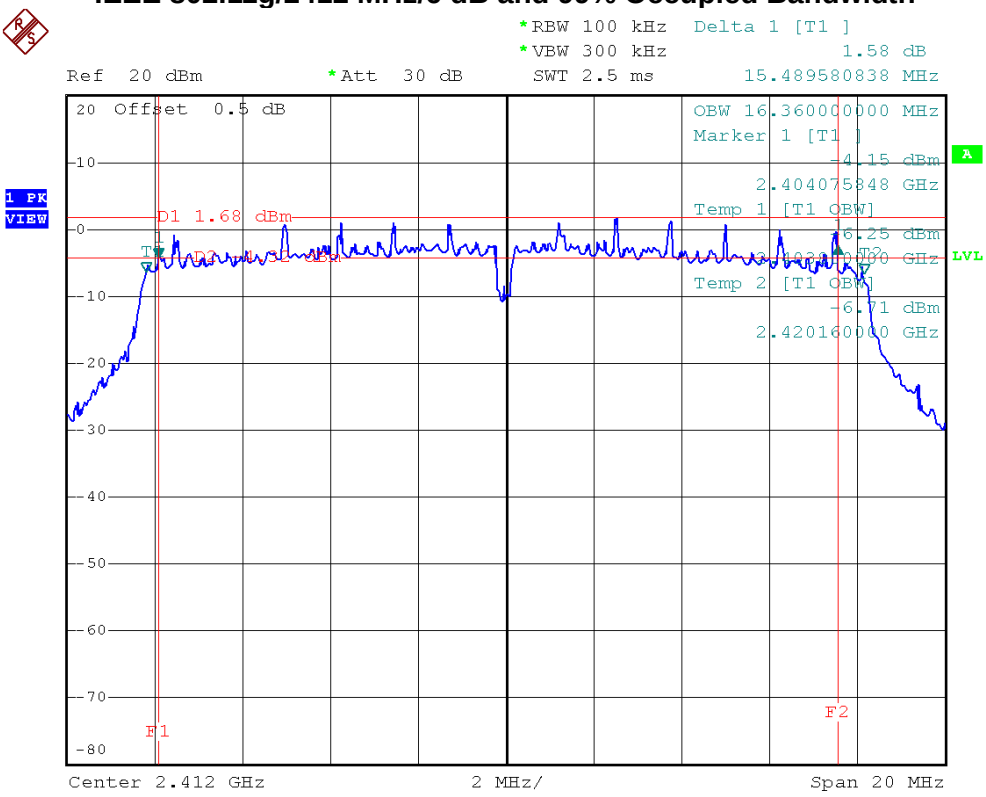
IEEE 802.11b/2462 MHz/6 dB and 99% Occupied Bandwidth



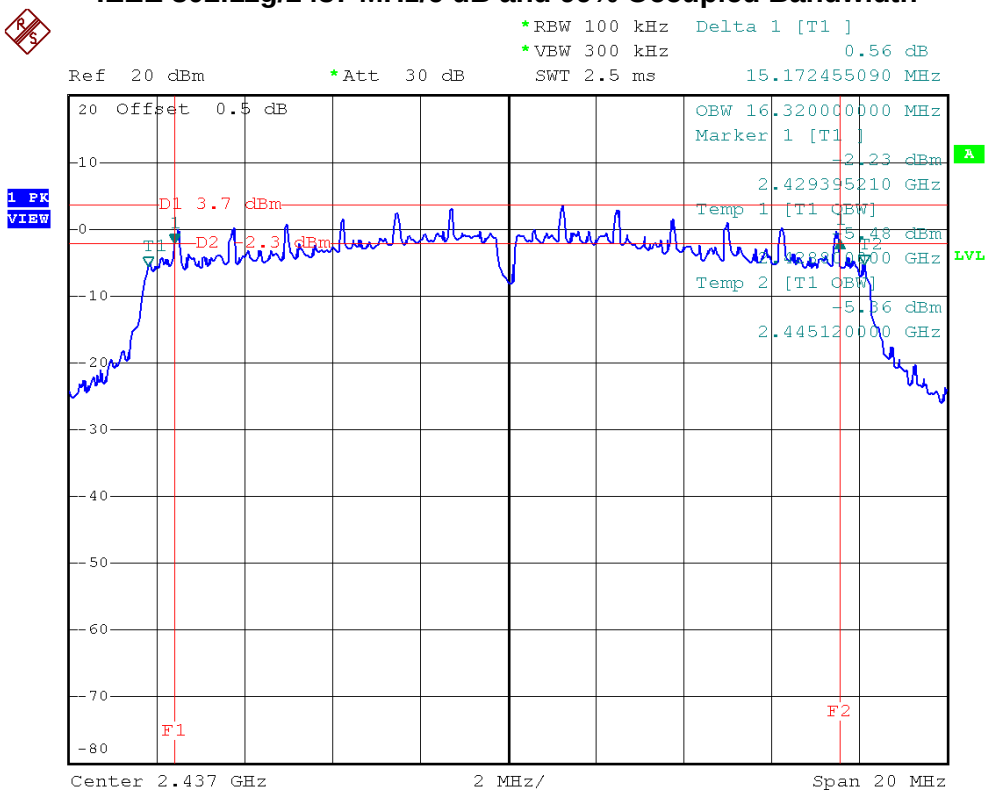
EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
2412 MHz	15.49	16.36	>=500 kHz	PASS
2437 MHz	15.17	16.32	>=500 kHz	PASS
2462 MHz	15.37	16.40	>=500 kHz	PASS

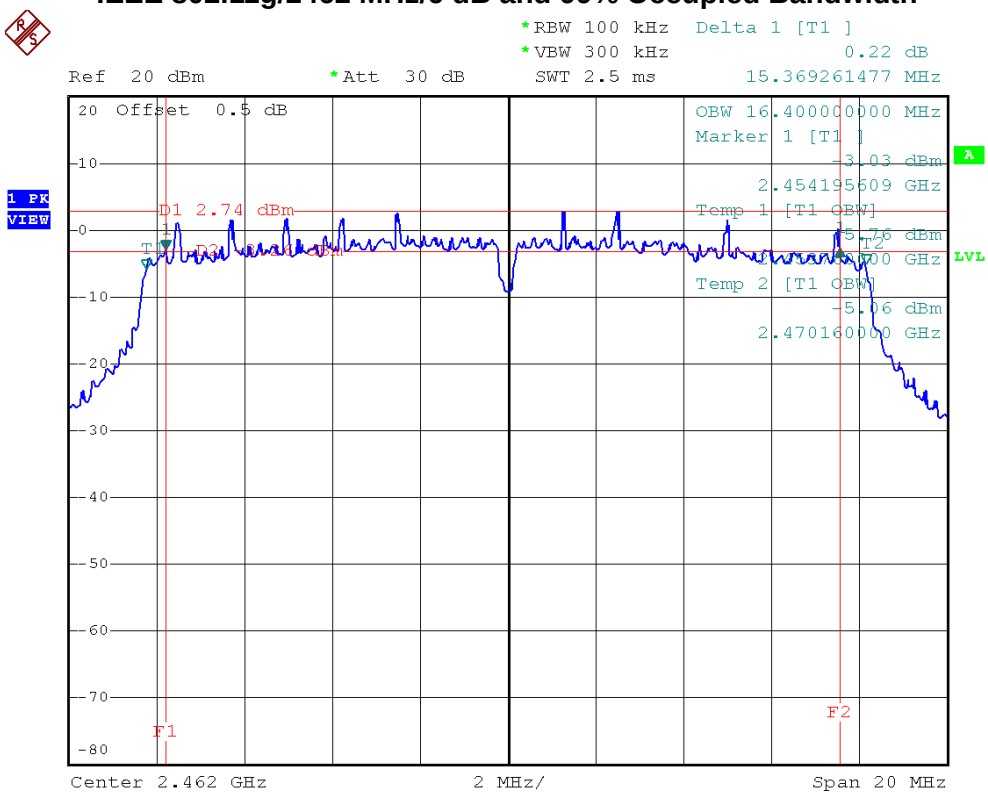
IEEE 802.11g/2412 MHz/6 dB and 99% Occupied Bandwidth



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



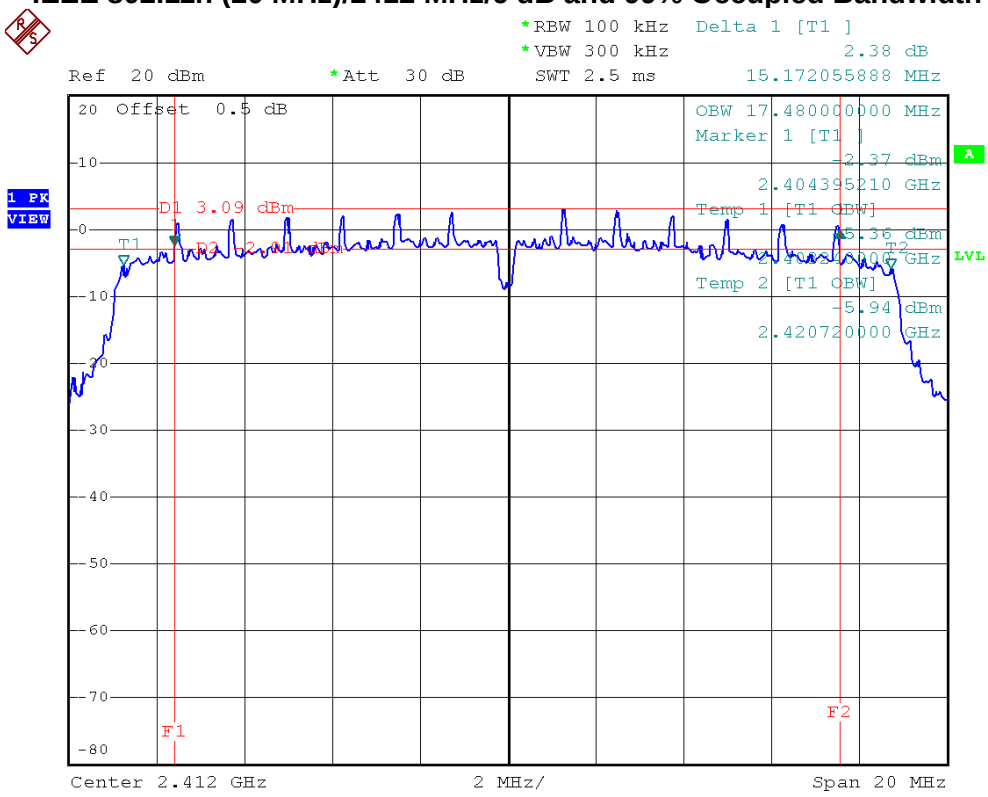
IEEE 802.11g/2462 MHz/6 dB and 99% Occupied Bandwidth



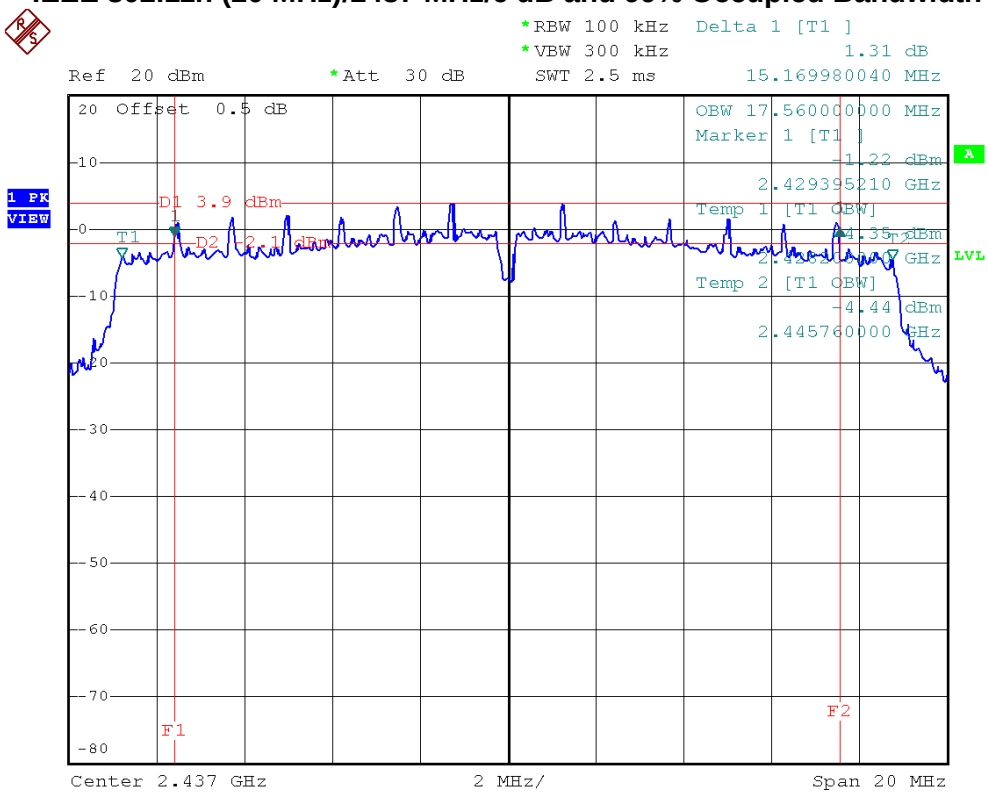
EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	26°C	Relative Humidity	46%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	6 dB Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	Limit	Result
2412 MHz	15.17	17.48	>=500 kHz	PASS
2437 MHz	15.17	17.56	>=500 kHz	PASS
2462 MHz	15.69	17.52	>=500 kHz	PASS

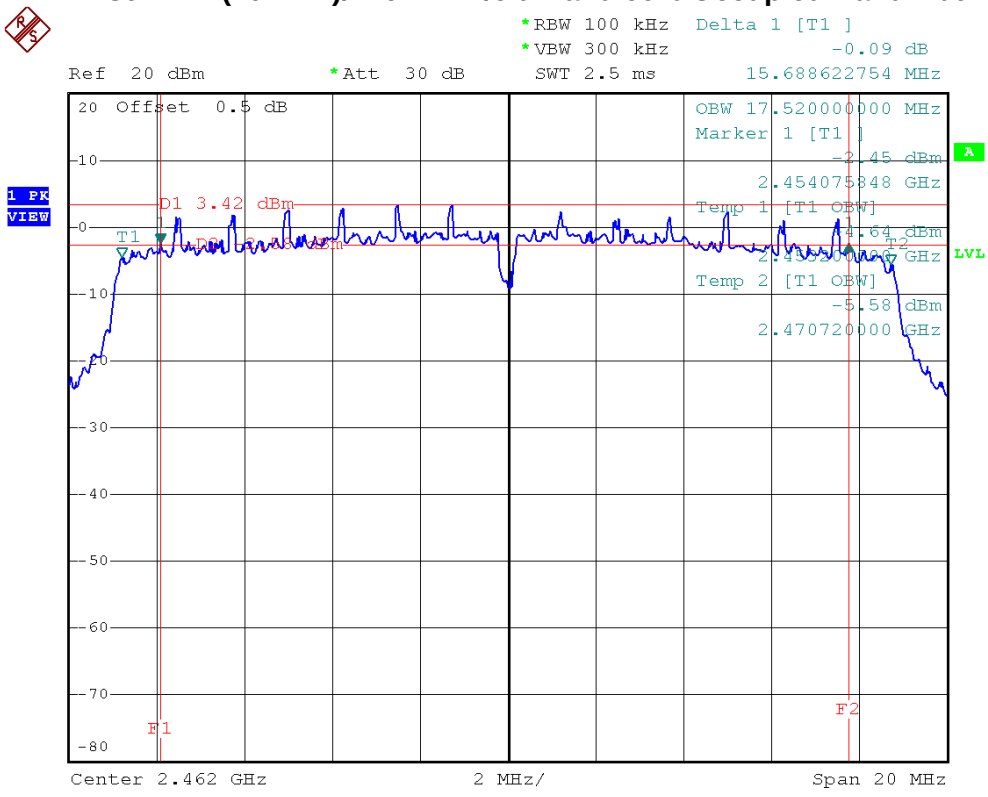
IEEE 802.11n (20 MHz)/2412 MHz/6 dB and 99% Occupied Bandwidth



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



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



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

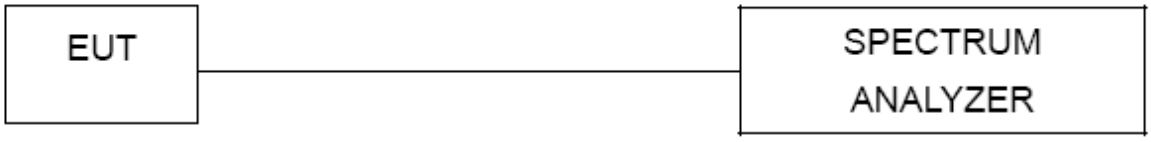
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014

NOTE: **N/A**: denotes No Model Name, No Serial No. or No Calibration specified.

7.3 TEST PROCEDURES

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

EUT	Multi-functional T&A Terminal	Model Name	MT700
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	17.36	0.0545	30	1	PASS
2437 MHz	17.98	0.0628	30	1	PASS
2462 MHz	17.98	0.0628	30	1	PASS

EUT	Multi-functional T&A Terminal	Model Name	MT700
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	21.26	0.1337	30	1	PASS
2437 MHz	21.03	0.1268	30	1	PASS
2462 MHz	22.03	0.1596	30	1	PASS

EUT	Multi-functional T&A Terminal	Model Name	MT700
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	21.18	0.1312	30	1	PASS
2437 MHz	21.39	0.1377	30	1	PASS
2462 MHz	22.07	0.1611	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. 15, 2014
3	Microwave Pre_amplifier	Agilent	8449B	3008A01714	Apr. 16, 2014
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
11	Preamplifier With Adaptor	EMC	EMC2654045	980030	Feb. 18, 2014
12	Horn Antenna	Schwarzbeck	BBHA 9170	340	Nov. 14, 2014

Remark: “N/A” denotes No Model Name, 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.

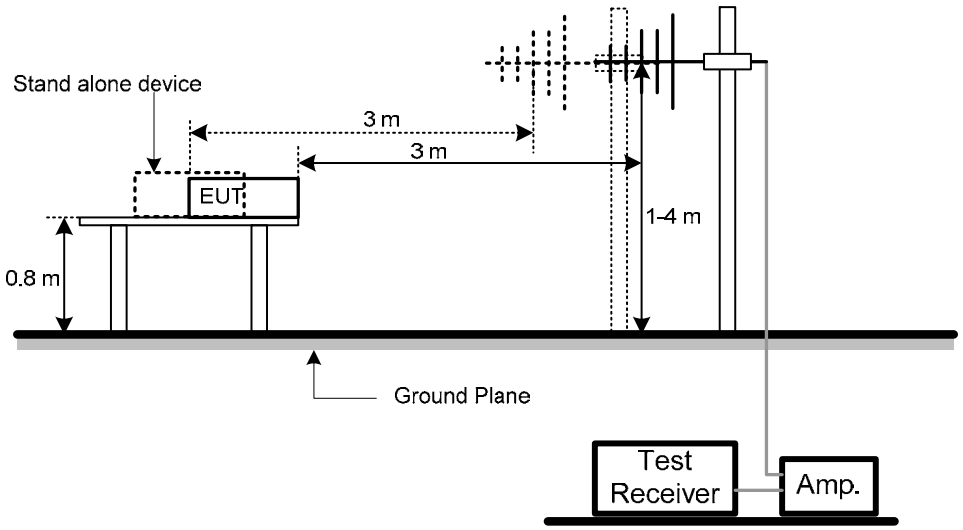
NOTE:

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



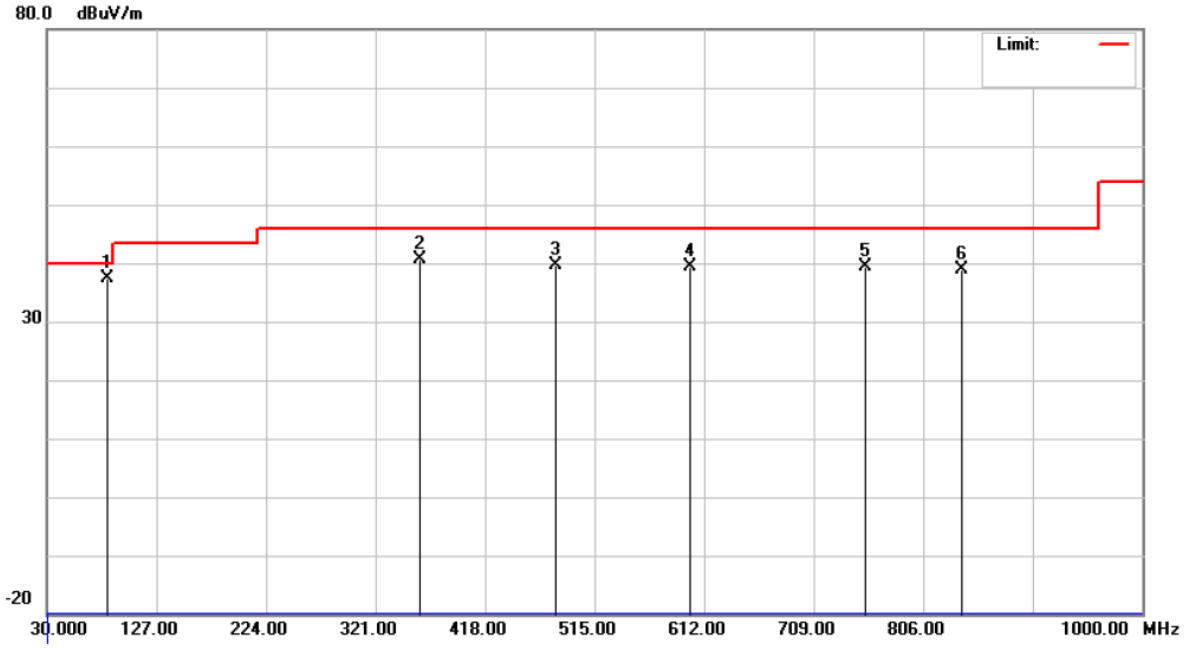
8.7 EUT OPERATING CONDITIONS

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	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

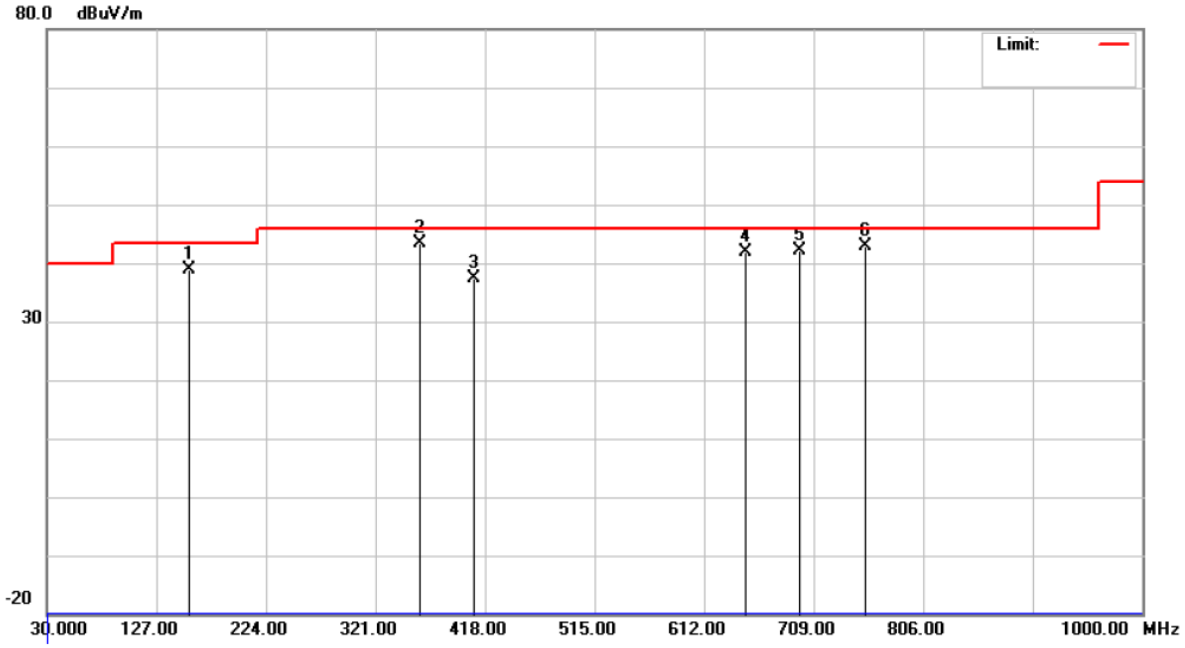
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	83.3499	56.57	-19.23	37.34	40.00	-2.66	peak	
2		359.7999	53.03	-12.37	40.66	46.00	-5.34	peak	
3		481.0499	49.31	-9.59	39.72	46.00	-6.28	peak	
4		599.8750	46.17	-6.76	39.41	46.00	-6.59	peak	
5		755.0750	44.72	-5.30	39.42	46.00	-6.58	peak	
6		839.9500	43.05	-4.19	38.86	46.00	-7.14	peak	

EUT	Multi-functional T&A Terminal	Model Name	MT700
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		156.1000	53.20	-14.28	38.92	43.50	-4.58	peak	
2	*	359.7999	55.72	-12.37	43.35	46.00	-2.65	peak	
3		408.2999	48.31	-10.95	37.36	46.00	-8.64	peak	
4		648.3750	48.85	-6.89	41.96	46.00	-4.04	peak	
5		696.8750	48.73	-6.50	42.23	46.00	-3.77	peak	
6		755.0750	48.12	-5.30	42.82	46.00	-3.18	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. 15, 2014
3	Microwave Pre_amplifier	Agilent	8449B	3008A01714	Apr. 16, 2014
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
11	Preamplifier With Adaptor	EMC	EMC2654045	980030	Feb. 18, 2014
12	Horn Antenna	Schwarzbeck	BBHA 9170	340	Nov. 14, 2014

Remark: “N/A” denotes No Model Name, 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.

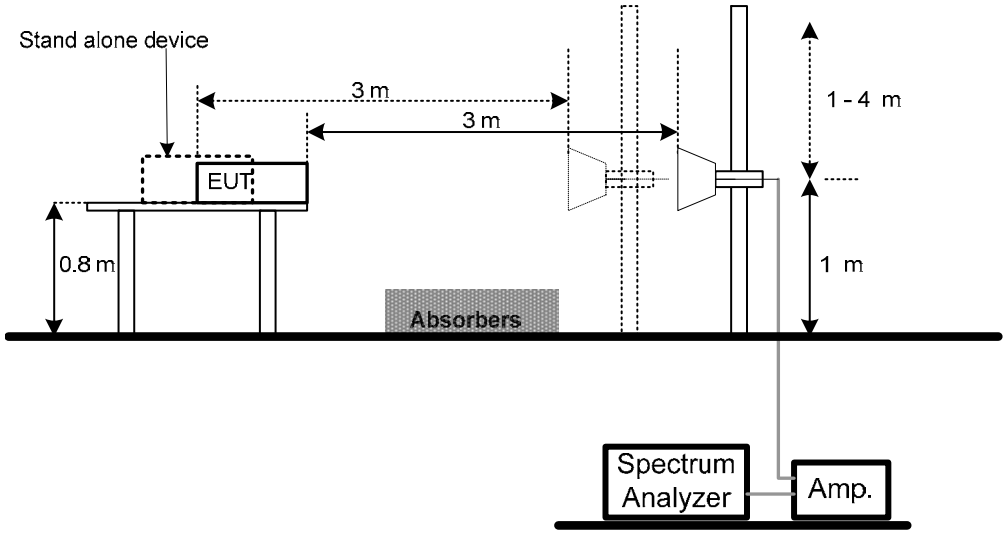
NOTE:

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



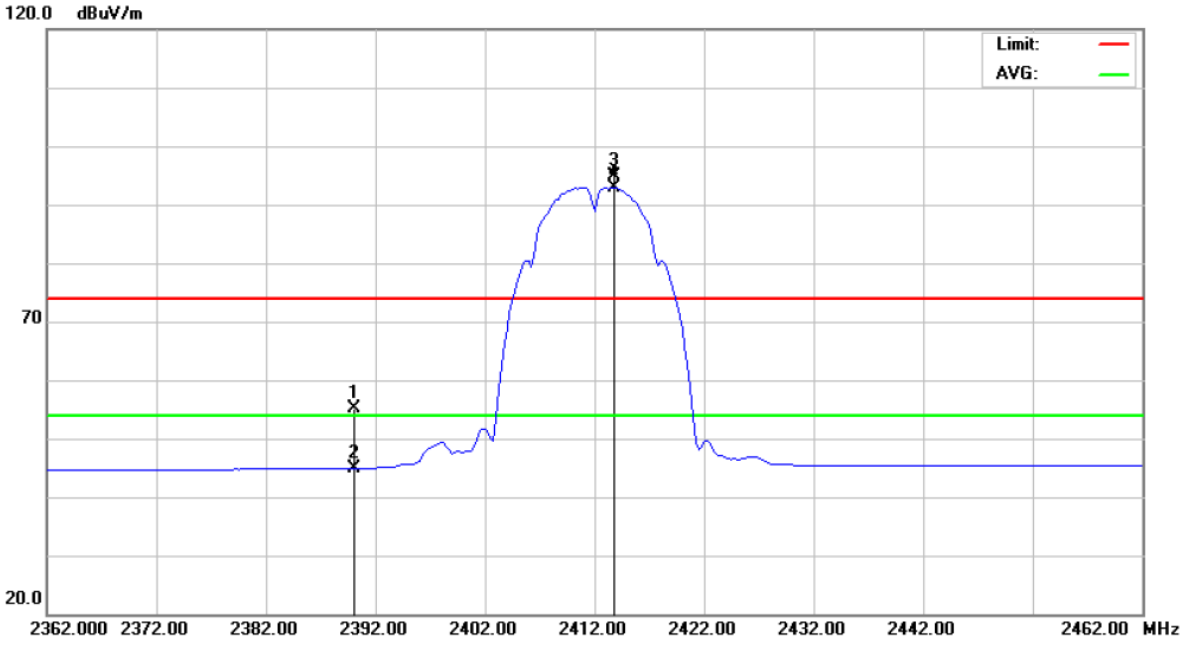
9.7 EUT OPERATING CONDITIONS

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

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz		

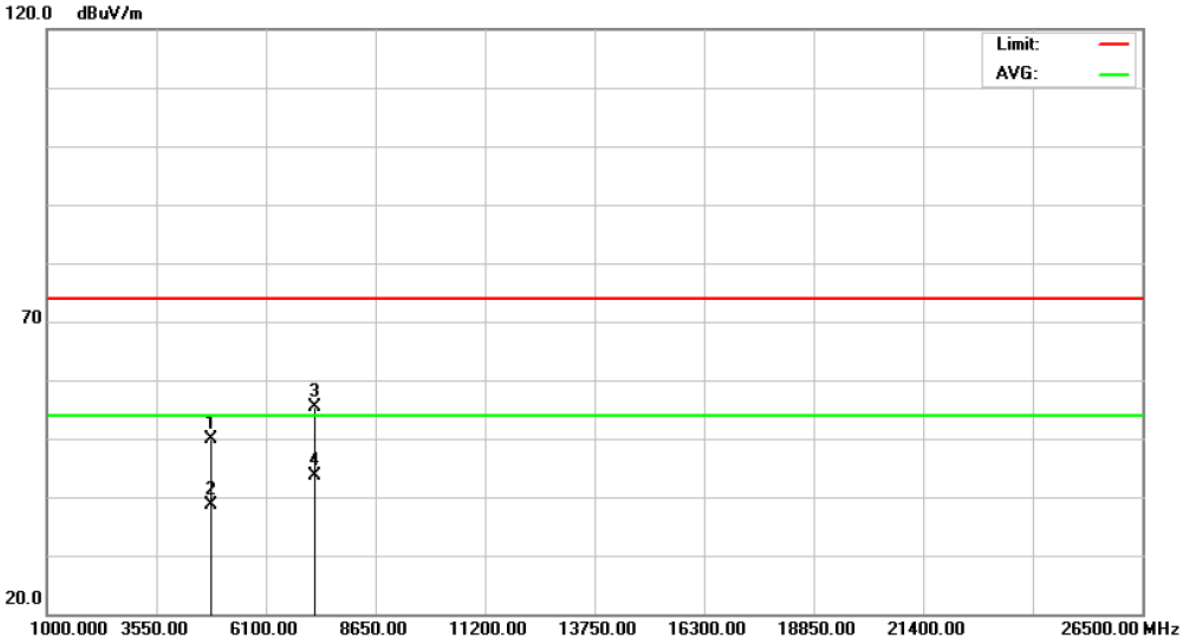
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	23.35	31.81	55.16	74.00	-18.84	peak	
2		2390.000	13.13	31.81	44.94	54.00	-9.06	AVG	
3	X	2413.750	63.08	31.91	94.99	74.00	20.99	peak	
4	*	2413.750	61.03	31.91	92.94	54.00	38.94	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz		

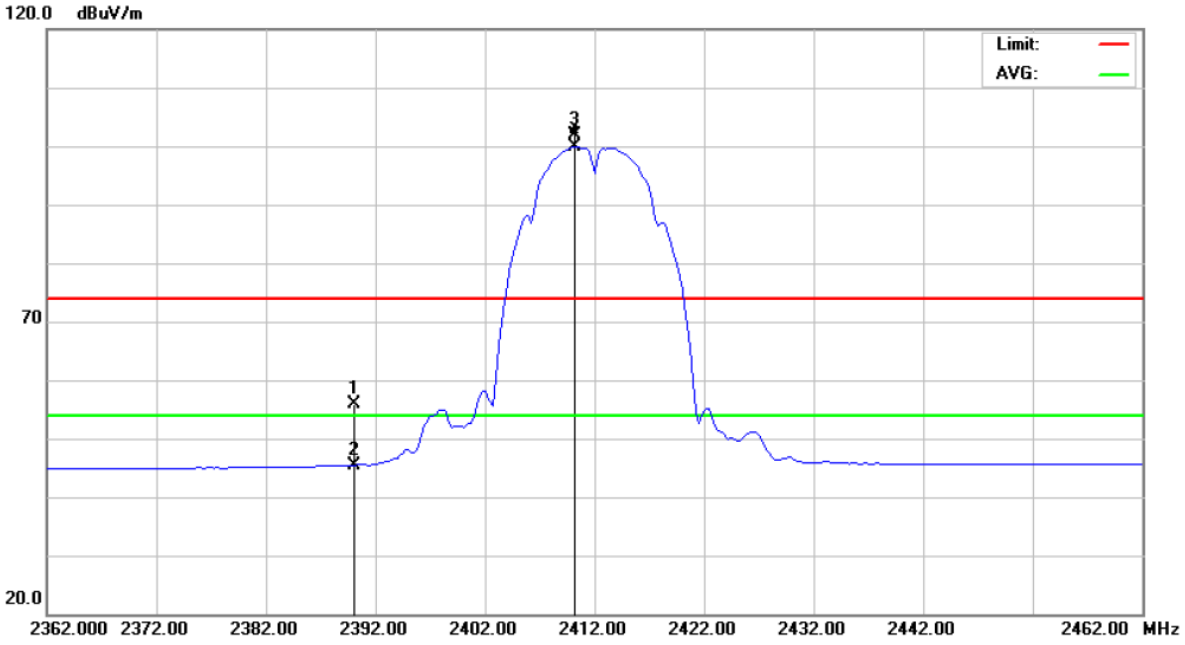
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4823.965	43.66	6.21	49.87	74.00	-24.13	peak	
2		4823.965	32.31	6.21	38.52	54.00	-15.48	AVG	
3		7236.155	42.97	12.49	55.46	74.00	-18.54	peak	
4	*	7236.155	31.23	12.49	43.72	54.00	-10.28	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz		

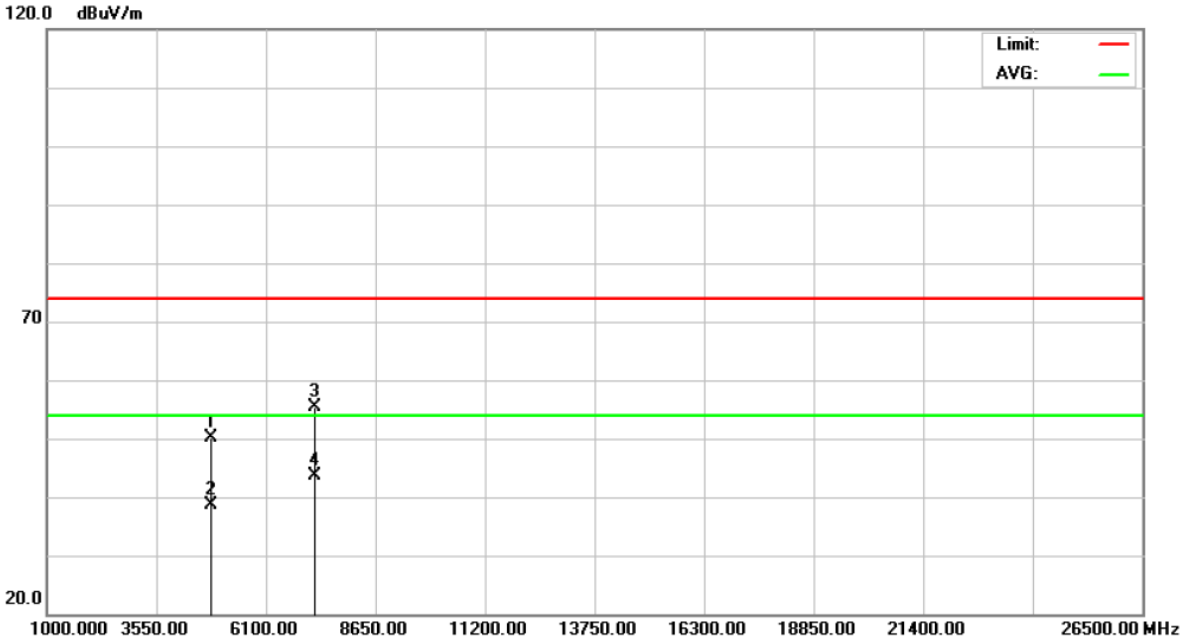
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	24.13	31.81	55.94	74.00	-18.06	peak	
2		2390.000	13.62	31.81	45.43	54.00	-8.57	AVG	
3	X	2410.250	70.00	31.89	101.89	74.00	27.89	peak	
4	*	2410.250	68.07	31.89	99.96	54.00	45.96	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz		

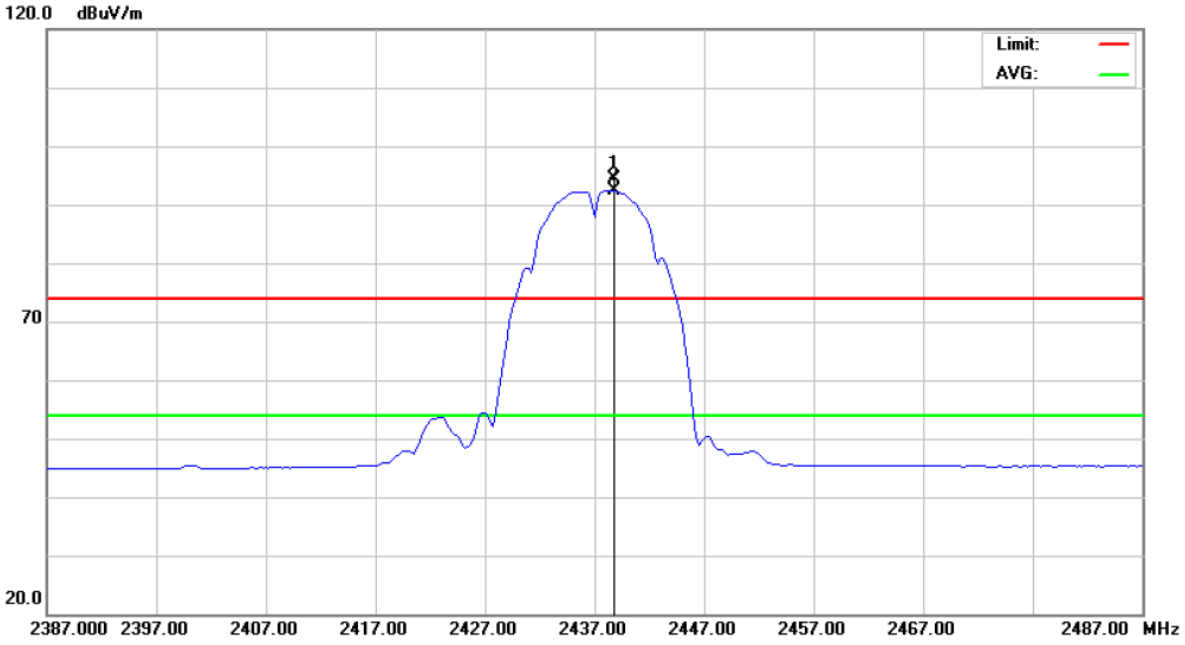
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4823.890	43.85	6.21	50.06	74.00	-23.94	peak	
2		4823.890	32.46	6.21	38.67	54.00	-15.33	AVG	
3		7236.075	42.81	12.49	55.30	74.00	-18.70	peak	
4	*	7236.075	31.18	12.49	43.67	54.00	-10.33	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

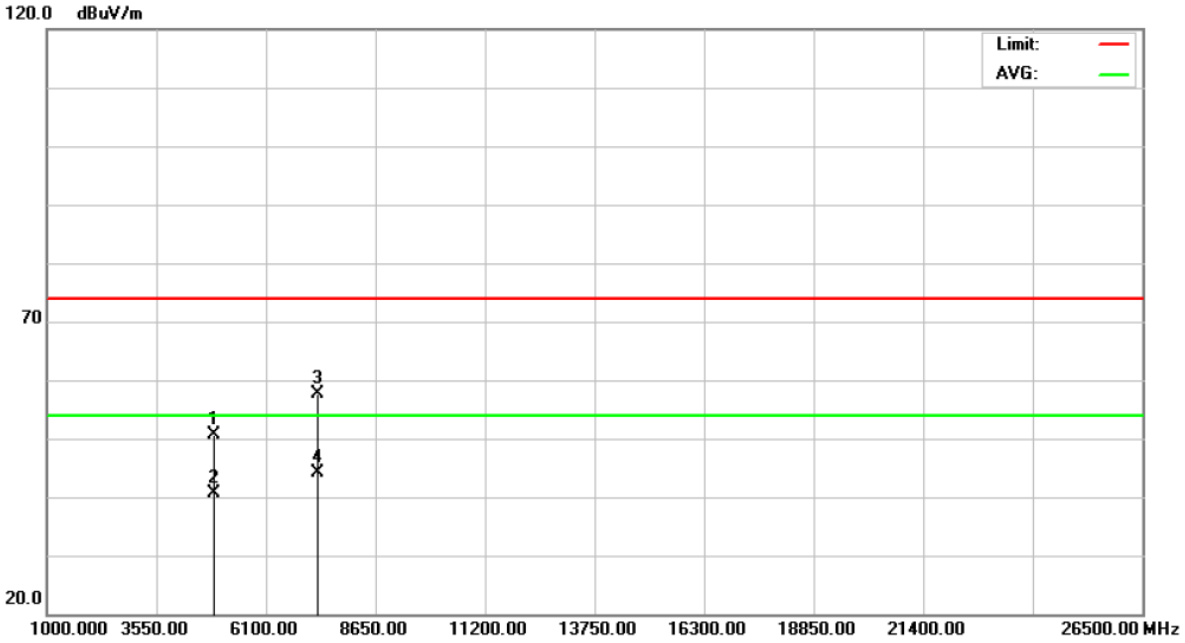
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2438.750	62.31	32.01	94.32	74.00	20.32	peak	
2	*	2438.750	60.43	32.01	92.44	54.00	38.44	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

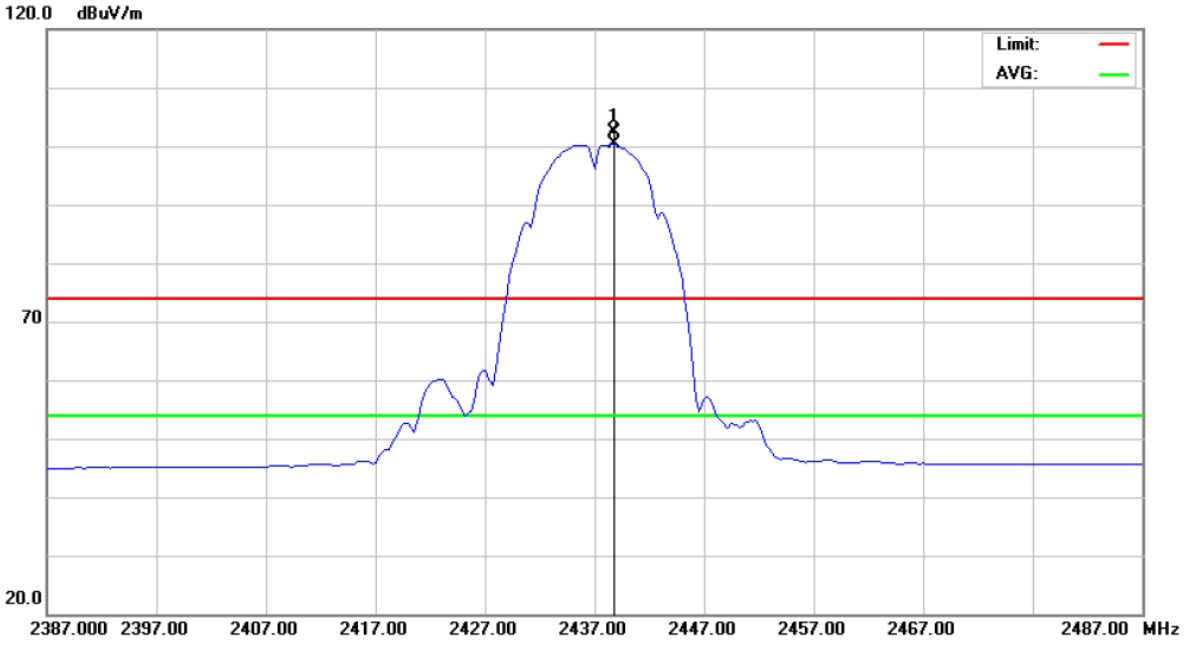
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4873.970	44.29	6.28	50.57	74.00	-23.43	peak	
2		4873.970	34.33	6.28	40.61	54.00	-13.39	AVG	
3		7311.140	44.81	12.77	57.58	74.00	-16.42	peak	
4	*	7311.140	31.43	12.77	44.20	54.00	-9.80	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

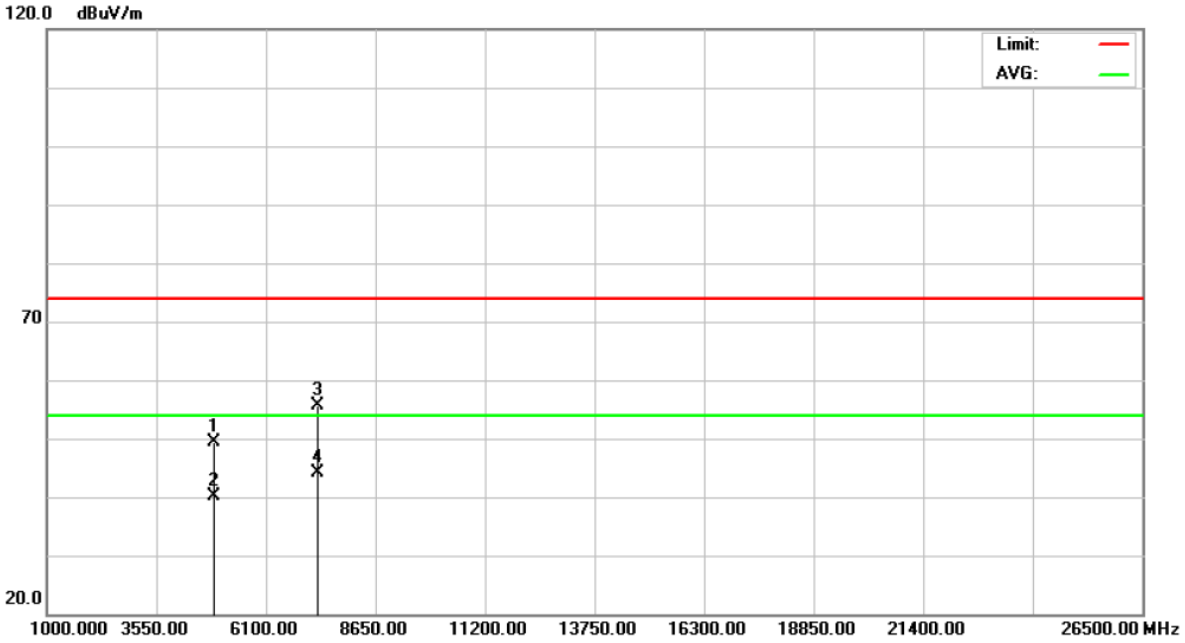
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2438.750	70.25	32.01	102.26	74.00	28.26	peak	
2	*	2438.750	68.34	32.01	100.35	54.00	46.35	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2437 MHz		

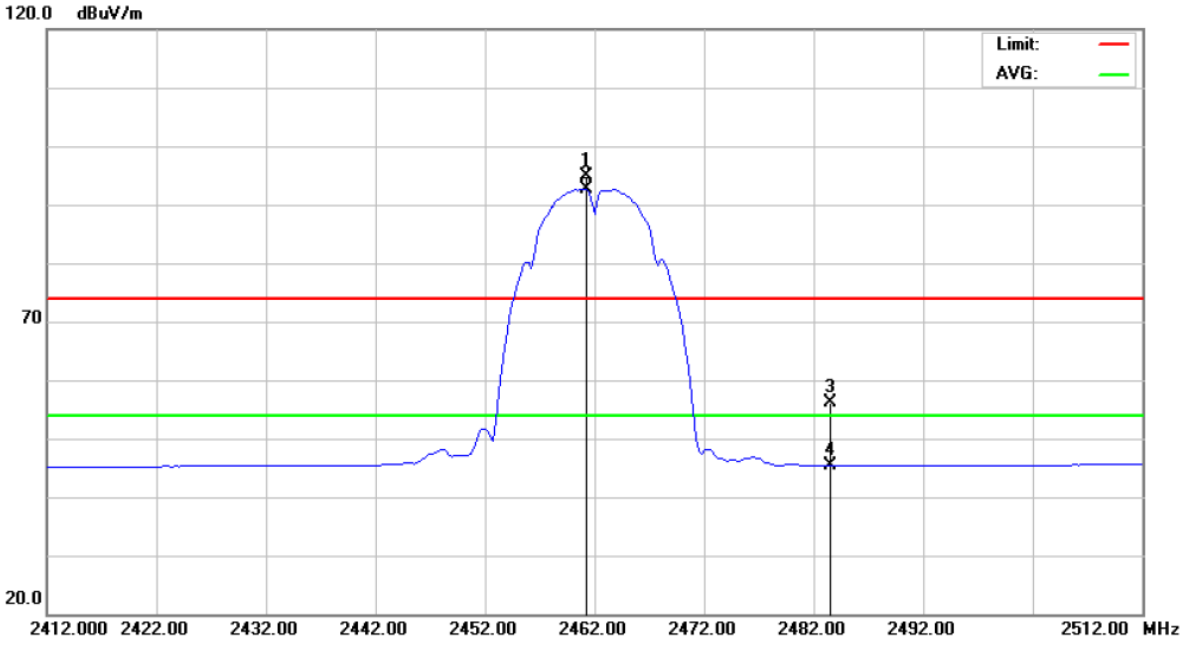
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.005	42.99	6.28	49.27	74.00	-24.73	peak	
2		4874.005	33.76	6.28	40.04	54.00	-13.96	AVG	
3		7310.875	42.85	12.77	55.62	74.00	-18.38	peak	
4	*	7310.875	31.44	12.77	44.21	54.00	-9.79	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2462 MHz		

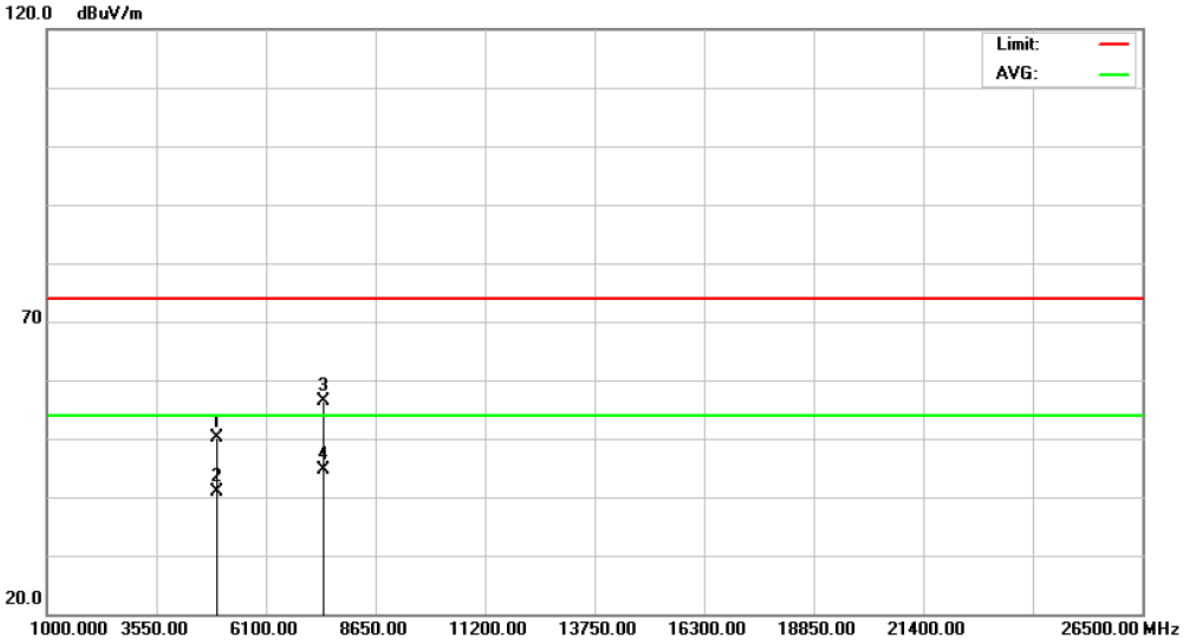
Polarization: Vertical



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	62.69	32.10	94.79	74.00	20.79	peak	
2	*	2461.250	60.56	32.10	92.66	54.00	38.66	AVG	
3		2483.500	23.88	32.19	56.07	74.00	-17.93	peak	
4		2483.500	13.18	32.19	45.37	54.00	-8.63	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2462 MHz		

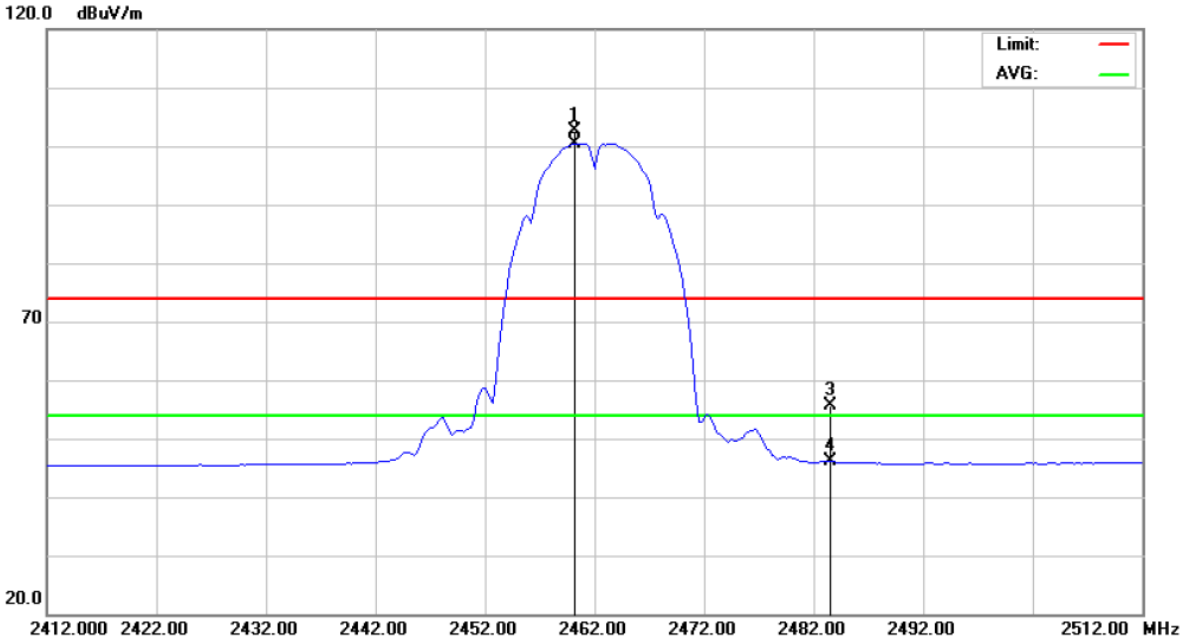
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4923.915	43.68	6.34	50.02	74.00	-23.98	peak	
2		4923.915	34.45	6.34	40.79	54.00	-13.21	AVG	
3		7386.000	43.24	13.05	56.29	74.00	-17.71	peak	
4	*	7386.000	31.70	13.05	44.75	54.00	-9.25	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2462 MHz		

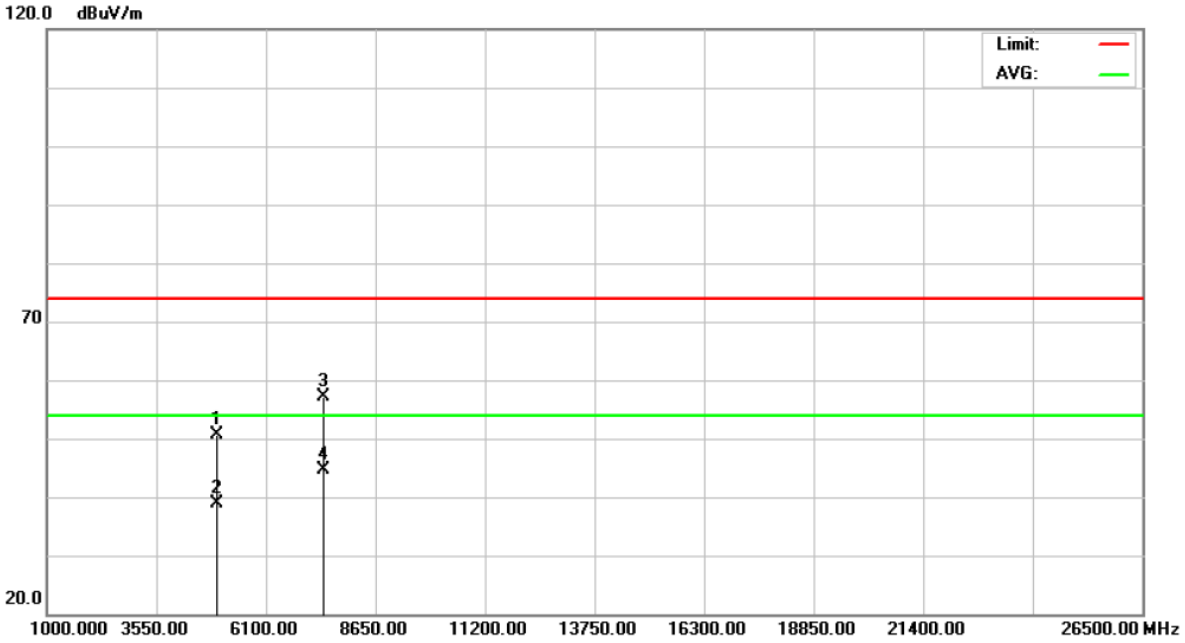
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2460.250	70.43	32.10	102.53	74.00	28.53	peak	
2	*	2460.250	68.31	32.10	100.41	54.00	46.41	AVG	
3		2483.500	23.54	32.19	55.73	74.00	-18.27	peak	
4		2483.500	13.85	32.19	46.04	54.00	-7.96	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2462 MHz		

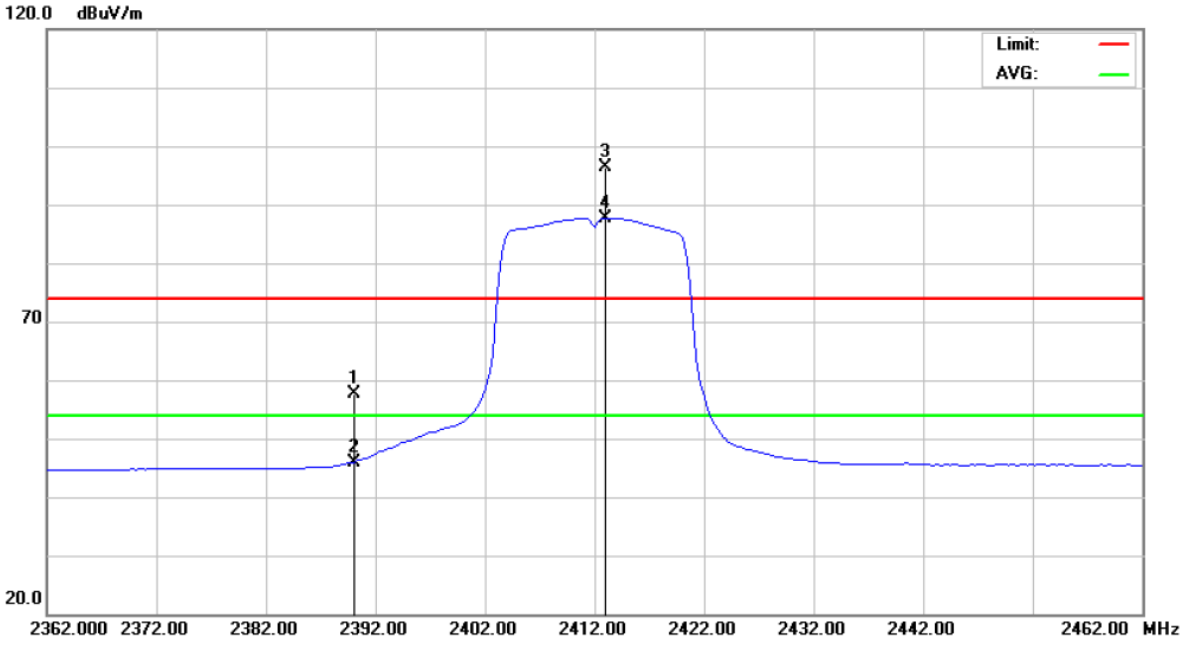
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4923.935	44.19	6.34	50.53	74.00	-23.47	peak	
2		4923.935	32.50	6.34	38.84	54.00	-15.16	AVG	
3		7386.270	43.99	13.05	57.04	74.00	-16.96	peak	
4	*	7386.270	31.61	13.05	44.66	54.00	-9.34	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz		

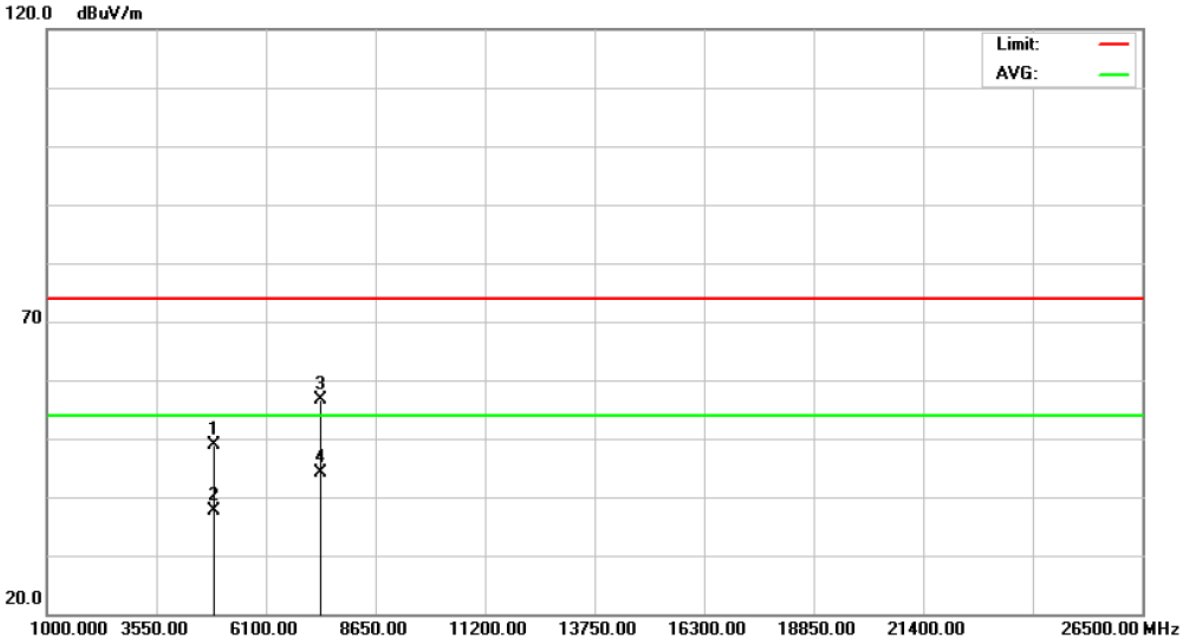
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	25.85	31.81	57.66	74.00	-16.34	peak	
2		2390.000	14.15	31.81	45.96	54.00	-8.04	AVG	
3	X	2413.000	64.35	31.91	96.26	74.00	22.26	peak	
4	*	2413.000	55.81	31.91	87.72	54.00	33.72	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz		

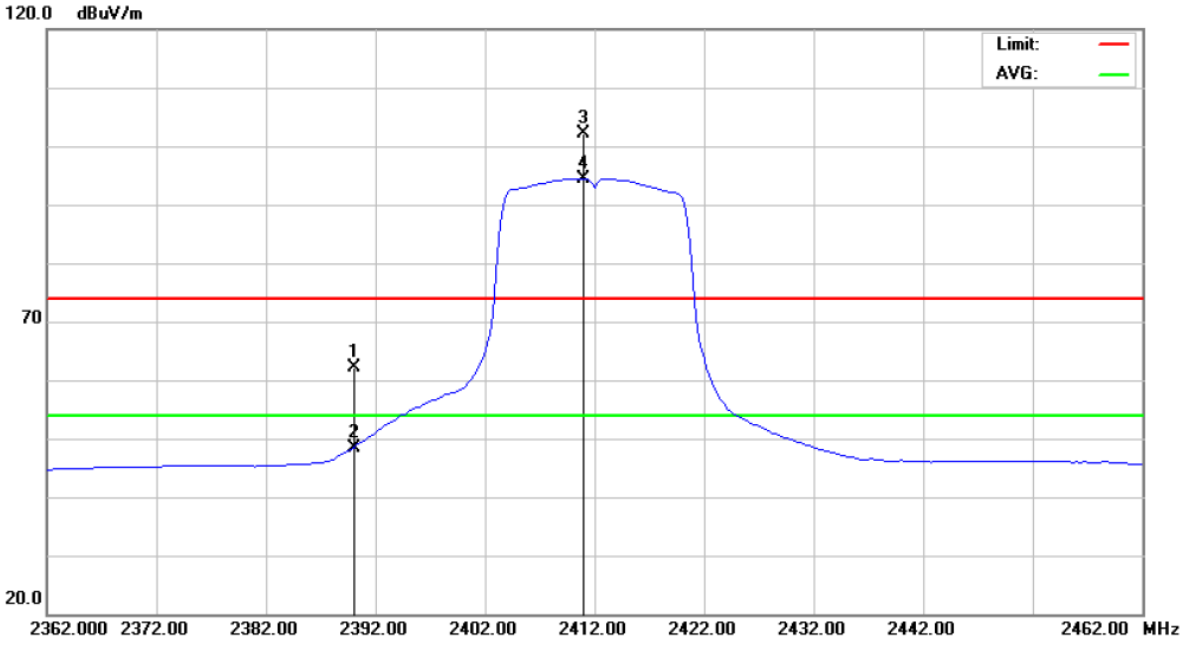
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4873.980	42.60	6.28	48.88	74.00	-25.12	peak	
2		4873.980	31.38	6.28	37.66	54.00	-16.34	AVG	
3		7311.480	43.85	12.77	56.62	74.00	-17.38	peak	
4	*	7311.480	31.35	12.77	44.12	54.00	-9.88	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz		

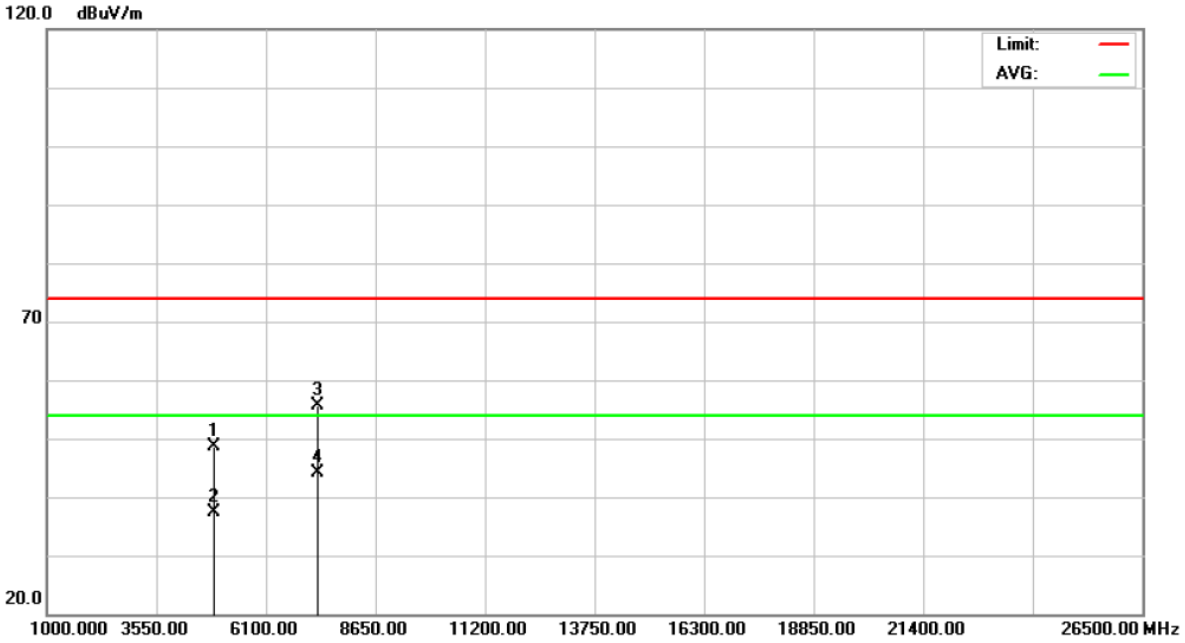
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	30.25	31.81	62.06	74.00	-11.94	peak	
2		2390.000	16.66	31.81	48.47	54.00	-5.53	AVG	
3	X	2411.000	70.29	31.90	102.19	74.00	28.19	peak	
4	*	2411.000	62.59	31.90	94.49	54.00	40.49	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz		

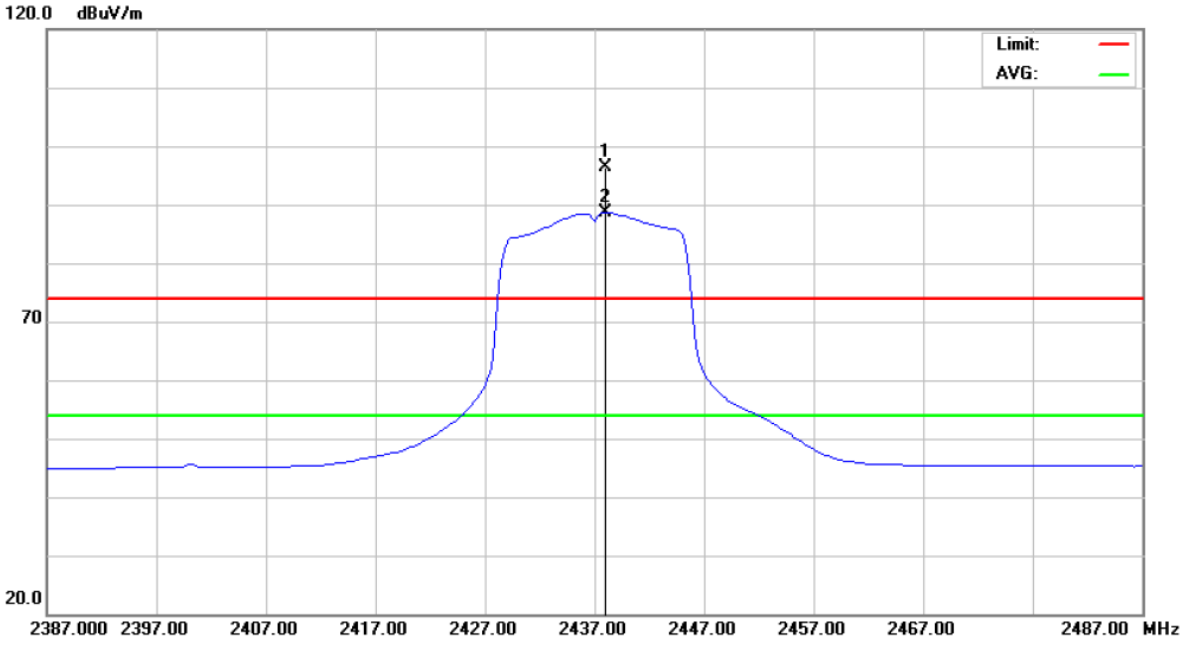
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4873.940	42.39	6.28	48.67	74.00	-25.33	peak	
2		4873.940	31.21	6.28	37.49	54.00	-16.51	AVG	
3		7310.885	42.82	12.77	55.59	74.00	-18.41	peak	
4	*	7310.885	31.41	12.77	44.18	54.00	-9.82	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2437 MHz		

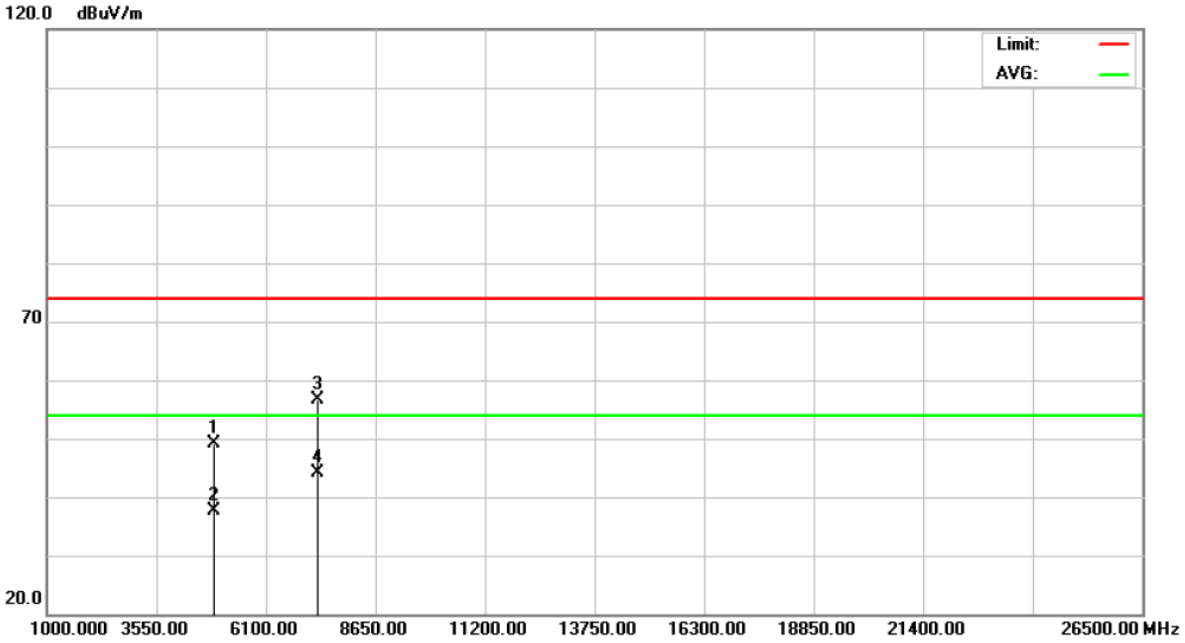
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2438.000	64.26	32.01	96.27	74.00	22.27	peak	
2	*	2438.000	56.56	32.01	88.57	54.00	34.57	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2437 MHz		

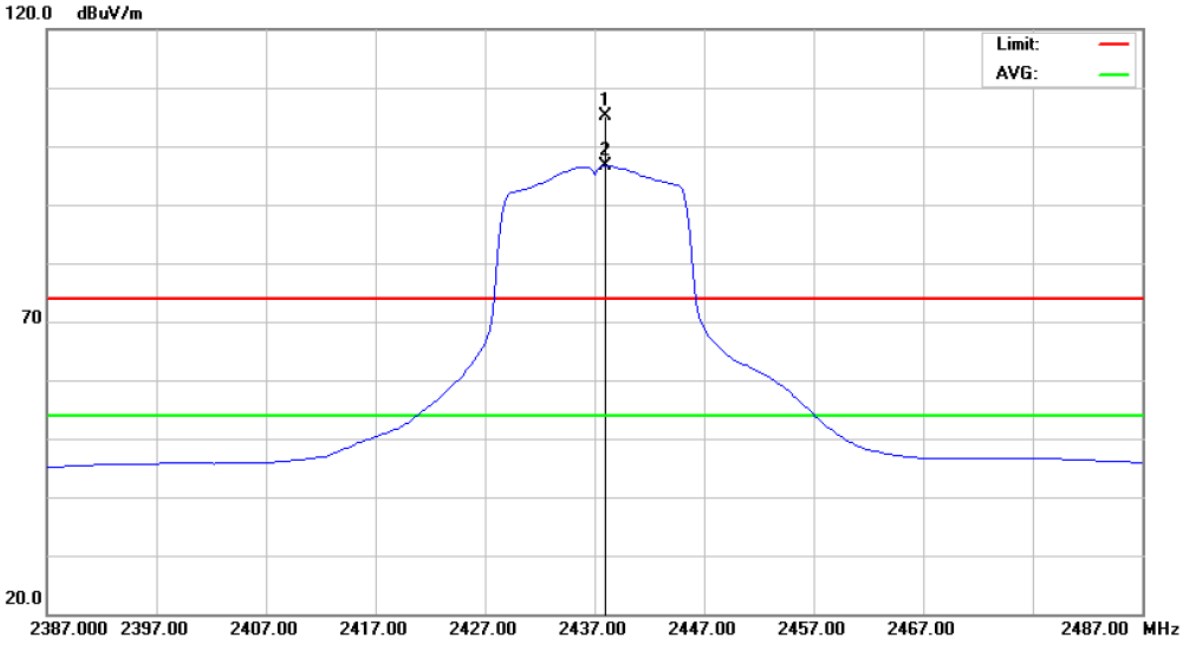
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4874.200	42.81	6.28	49.09	74.00	-24.91	peak	
2		4874.200	31.44	6.28	37.72	54.00	-16.28	AVG	
3		7310.920	43.82	12.77	56.59	74.00	-17.41	peak	
4	*	7310.920	31.40	12.77	44.17	54.00	-9.83	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2437 MHz		

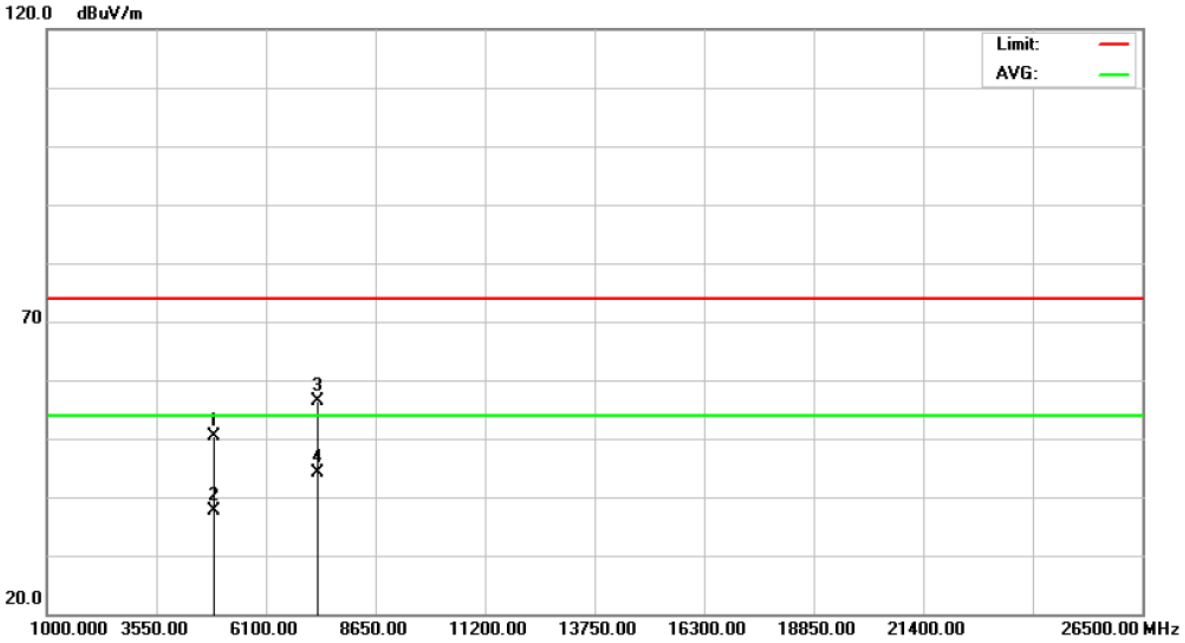
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2438.000	73.20	32.01	105.21	74.00	31.21	peak	
2	*	2438.000	64.58	32.01	96.59	54.00	42.59	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2437 MHz		

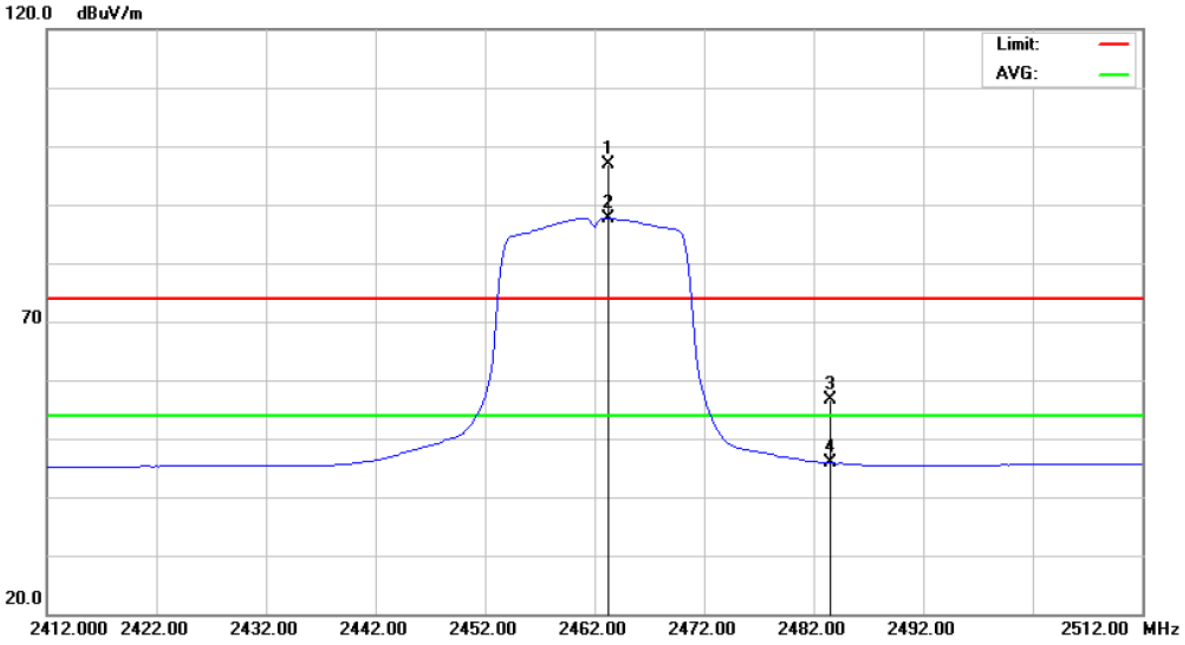
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4873.945	44.03	6.28	50.31	74.00	-23.69	peak	
2		4873.945	31.39	6.28	37.67	54.00	-16.33	AVG	
3		7311.135	43.49	12.77	56.26	74.00	-17.74	peak	
4	*	7311.135	31.38	12.77	44.15	54.00	-9.85	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2462 MHz		

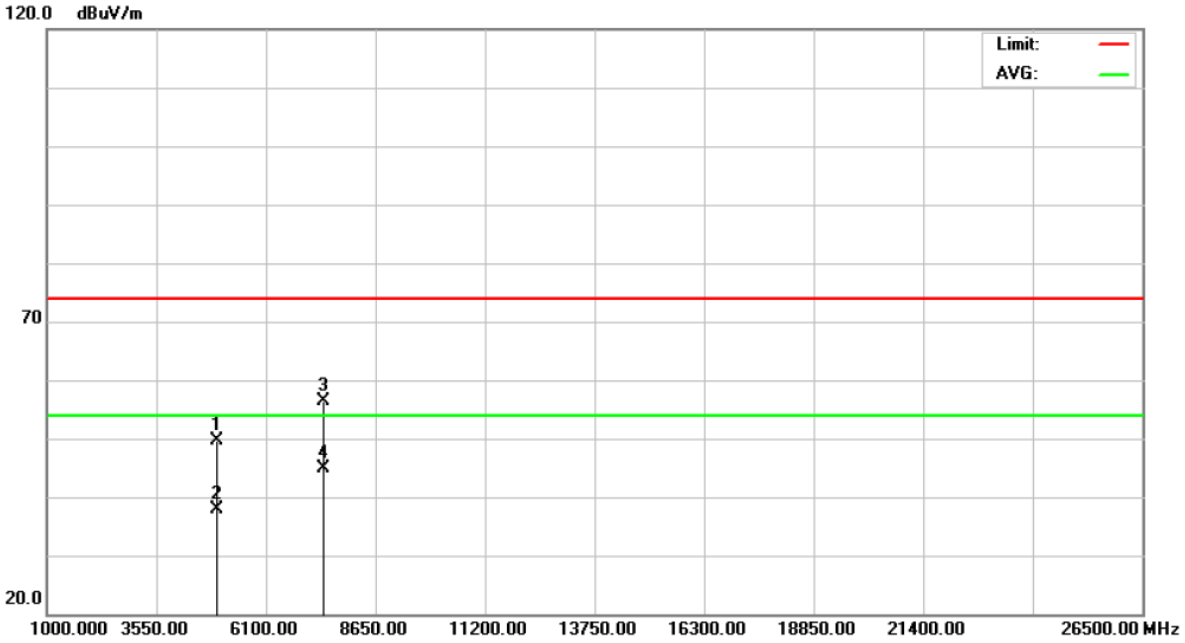
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2463.250	64.77	32.11	96.88	74.00	22.88	peak	
2	*	2463.250	55.57	32.11	87.68	54.00	33.68	AVG	
3		2483.500	24.41	32.19	56.60	74.00	-17.40	peak	
4		2483.500	13.62	32.19	45.81	54.00	-8.19	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2462 MHz		

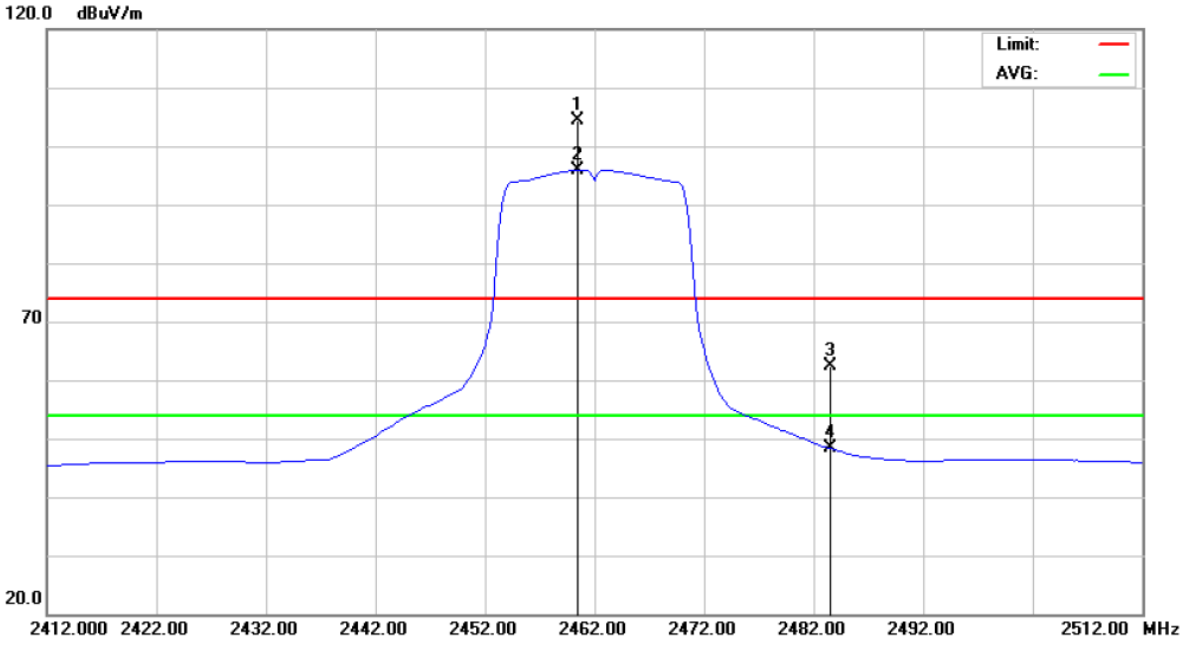
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.160	43.38	6.34	49.72	74.00	-24.28	peak	
2		4924.160	31.42	6.34	37.76	54.00	-16.24	AVG	
3		7385.320	43.43	13.04	56.47	74.00	-17.53	peak	
4	*	7385.320	31.73	13.04	44.77	54.00	-9.23	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2462 MHz		

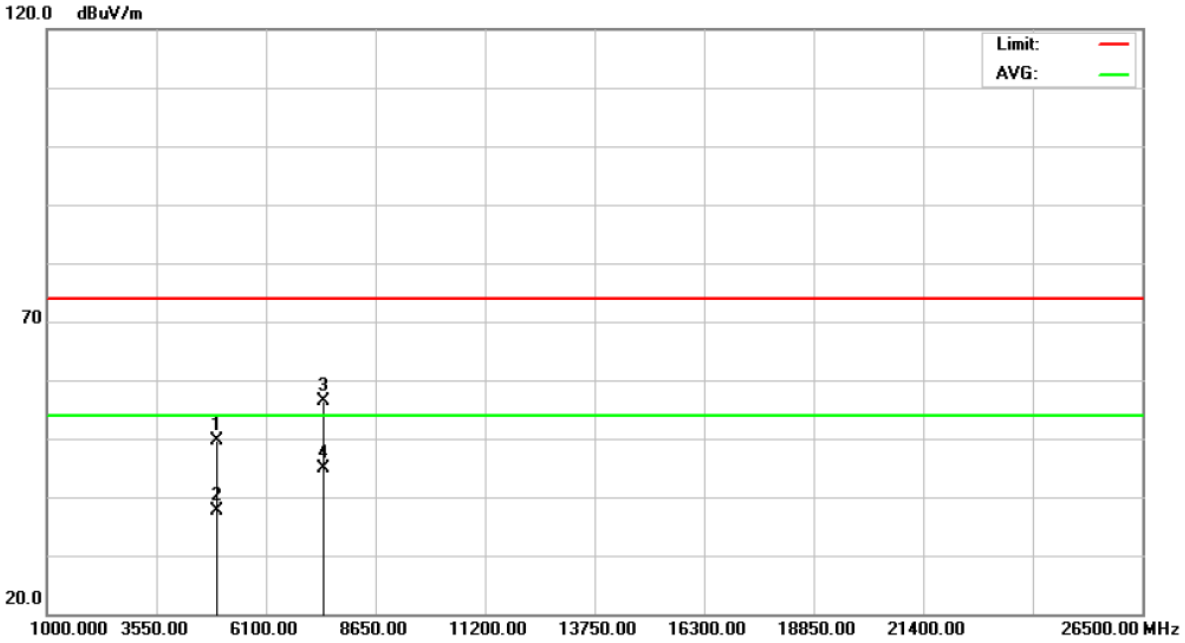
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2460.500	72.35	32.10	104.45	74.00	30.45	peak	
2	*	2460.500	63.88	32.10	95.98	54.00	41.98	AVG	
3		2483.500	30.24	32.19	62.43	74.00	-11.57	peak	
4		2483.500	16.13	32.19	48.32	54.00	-5.68	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2462 MHz		

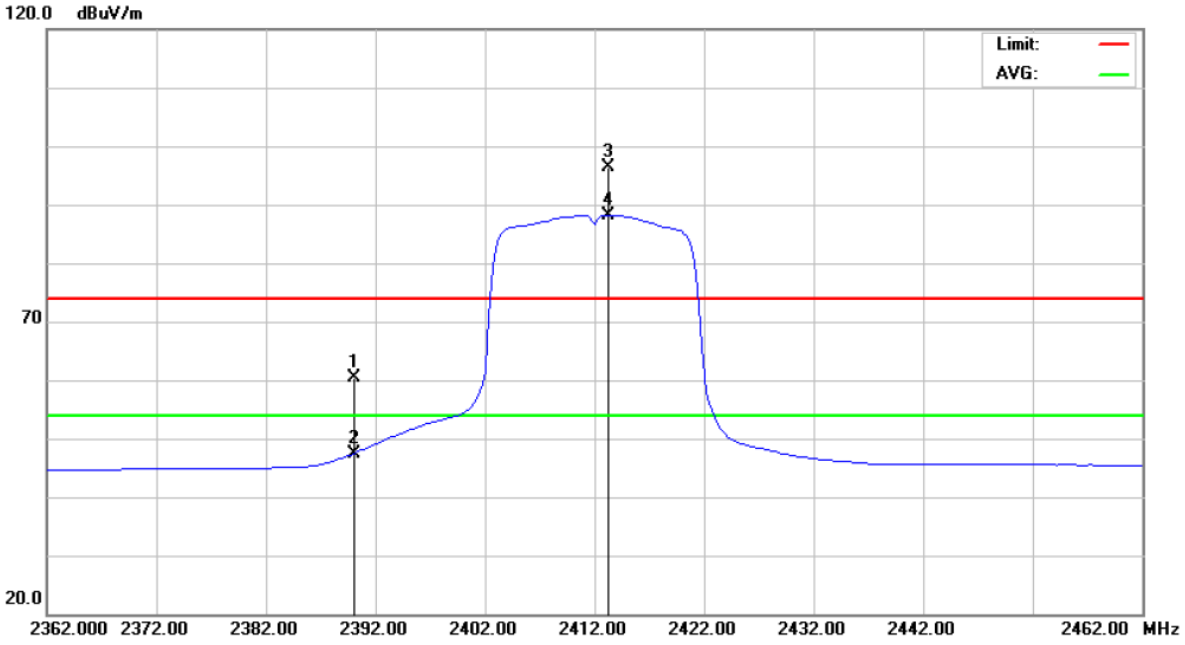
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.005	43.28	6.34	49.62	74.00	-24.38	peak	
2		4924.005	31.41	6.34	37.75	54.00	-16.25	AVG	
3		7385.845	43.38	13.05	56.43	74.00	-17.57	peak	
4	*	7385.845	31.77	13.05	44.82	54.00	-9.18	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz		

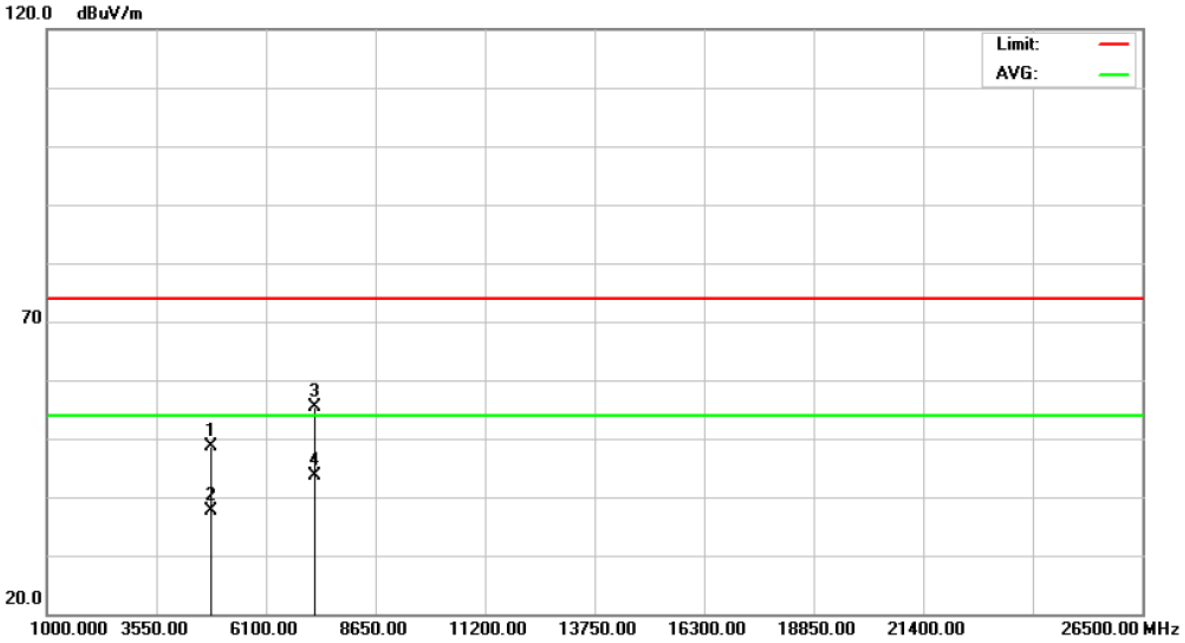
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	28.45	31.81	60.26	74.00	-13.74	peak	
2		2390.000	15.61	31.81	47.42	54.00	-6.58	AVG	
3	X	2413.250	64.50	31.91	96.41	74.00	22.41	peak	
4	*	2413.250	56.33	31.91	88.24	54.00	34.24	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz		

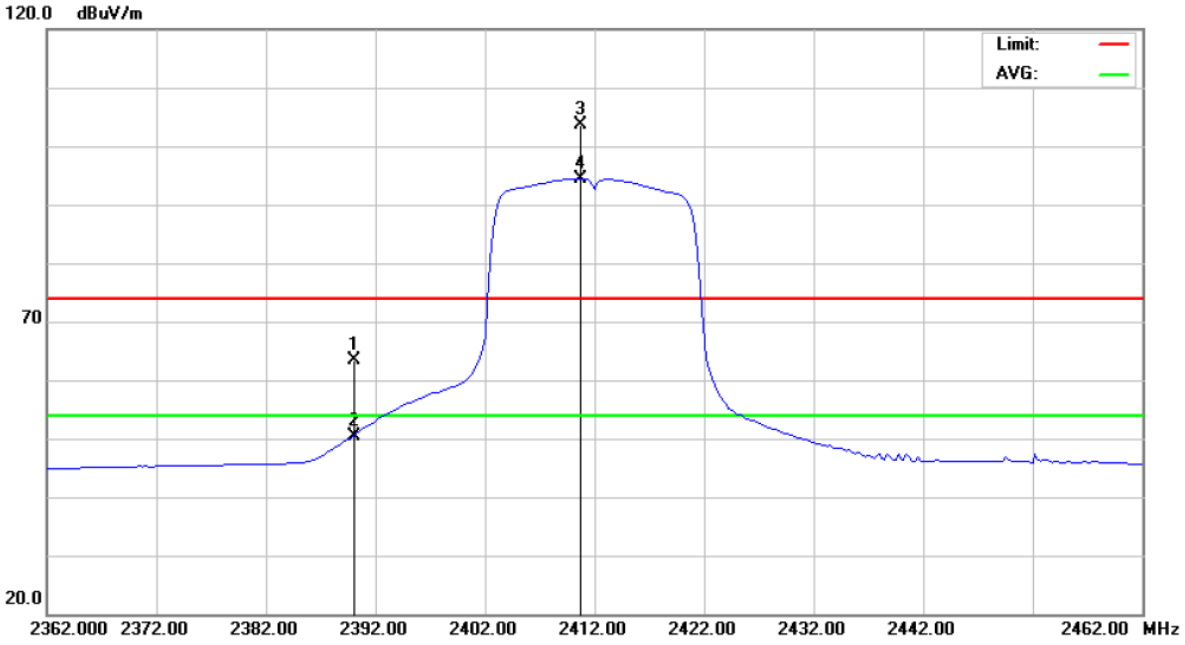
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4823.870	42.51	6.21	48.72	74.00	-25.28	peak	
2		4823.870	31.44	6.21	37.65	54.00	-16.35	AVG	
3		7236.165	42.82	12.49	55.31	74.00	-18.69	peak	
4	*	7236.165	31.06	12.49	43.55	54.00	-10.45	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz		

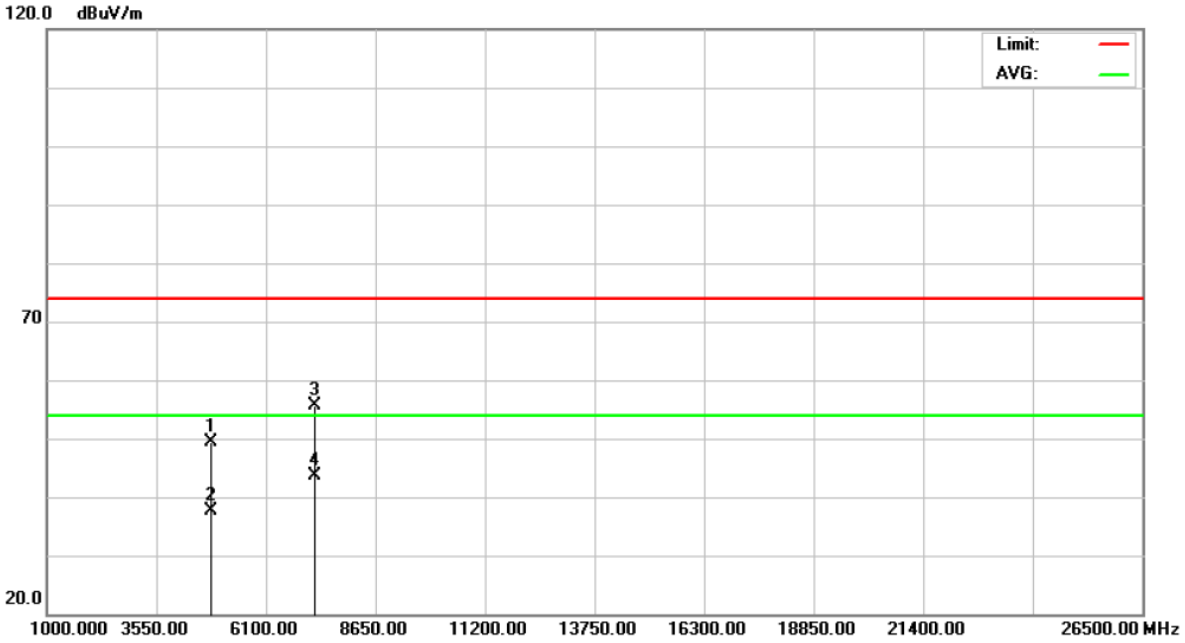
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	31.66	31.81	63.47	74.00	-10.53	peak	
2		2390.000	18.66	31.81	50.47	54.00	-3.53	AVG	
3	X	2410.750	71.78	31.90	103.68	74.00	29.68	peak	
4	*	2410.750	62.57	31.90	94.47	54.00	40.47	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz		

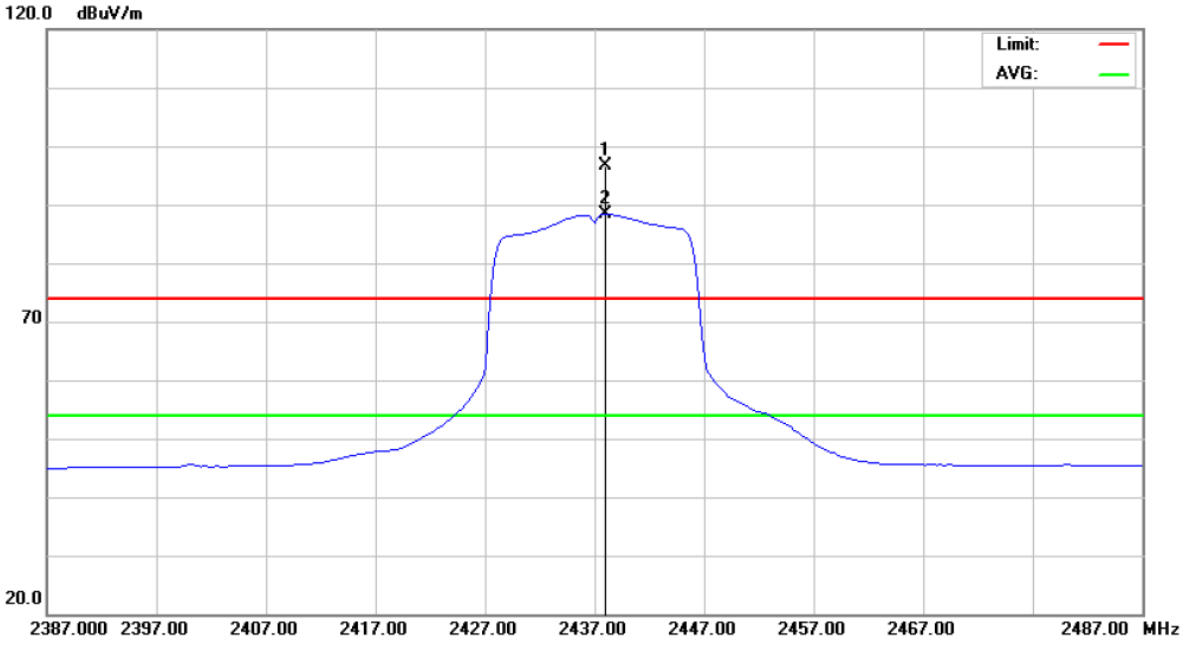
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4824.055	43.20	6.21	49.41	74.00	-24.59	peak	
2		4824.055	31.35	6.21	37.56	54.00	-16.44	AVG	
3		7236.020	43.21	12.49	55.70	74.00	-18.30	peak	
4	*	7236.020	31.09	12.49	43.58	54.00	-10.42	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz		

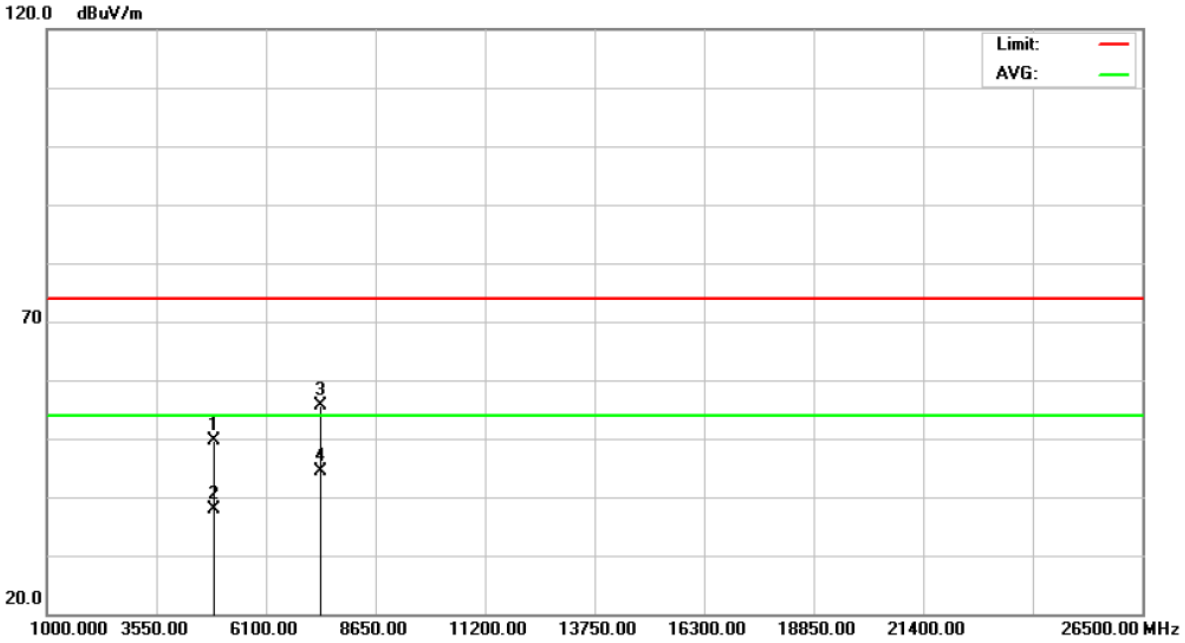
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	X	2438.000	64.65	32.01	96.66	74.00	22.66	peak	
2	*	2438.000	56.37	32.01	88.38	54.00	34.38	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz		

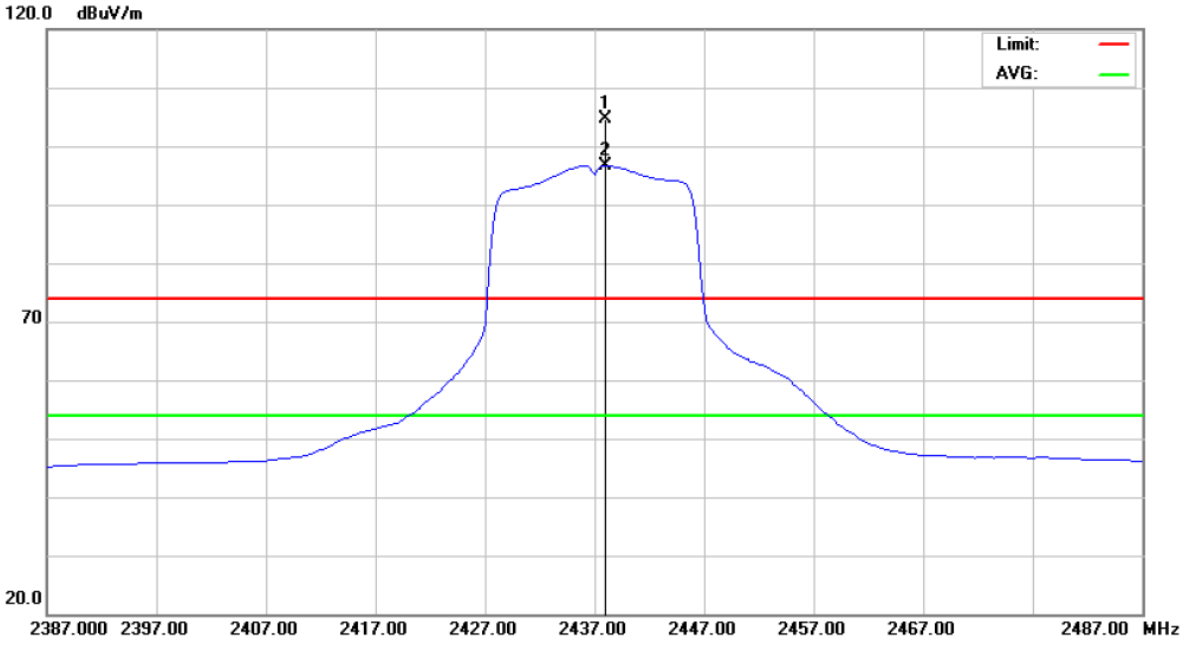
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4873.890	43.42	6.28	49.70	74.00	-24.30	peak	
2		4873.890	31.62	6.28	37.90	54.00	-16.10	AVG	
3		7311.425	42.92	12.77	55.69	74.00	-18.31	peak	
4	*	7311.425	31.53	12.77	44.30	54.00	-9.70	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz		

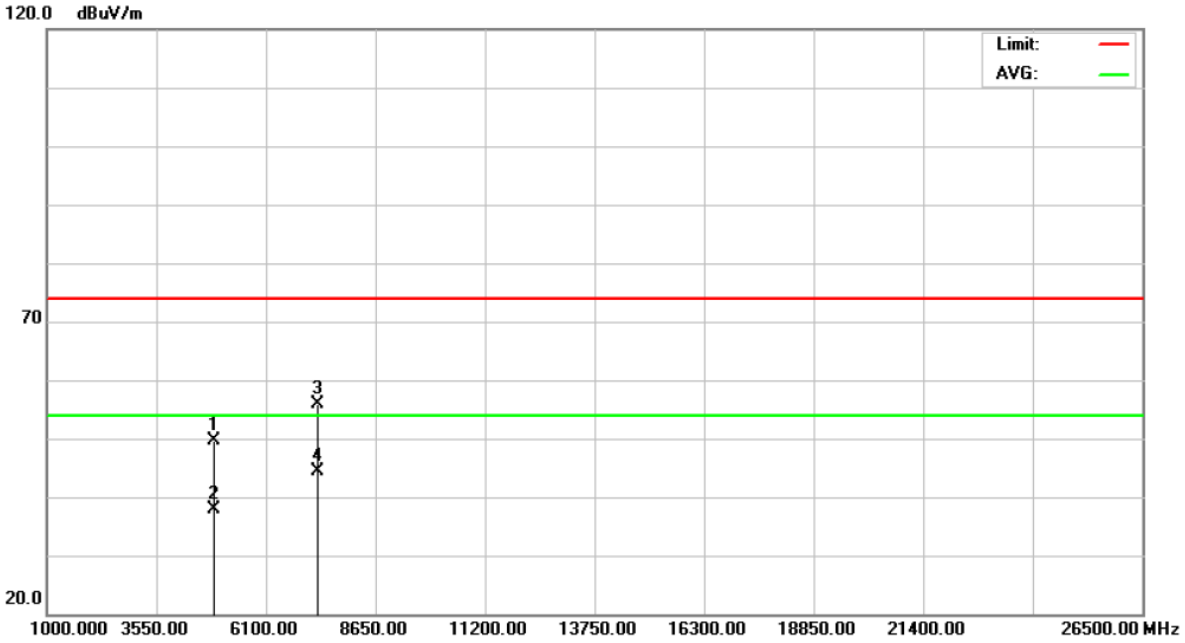
Polarization: Horizontal



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	72.60	32.01	104.61	74.00	30.61	peak	
2	*	2438.000	64.63	32.01	96.64	54.00	42.64	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2437 MHz		

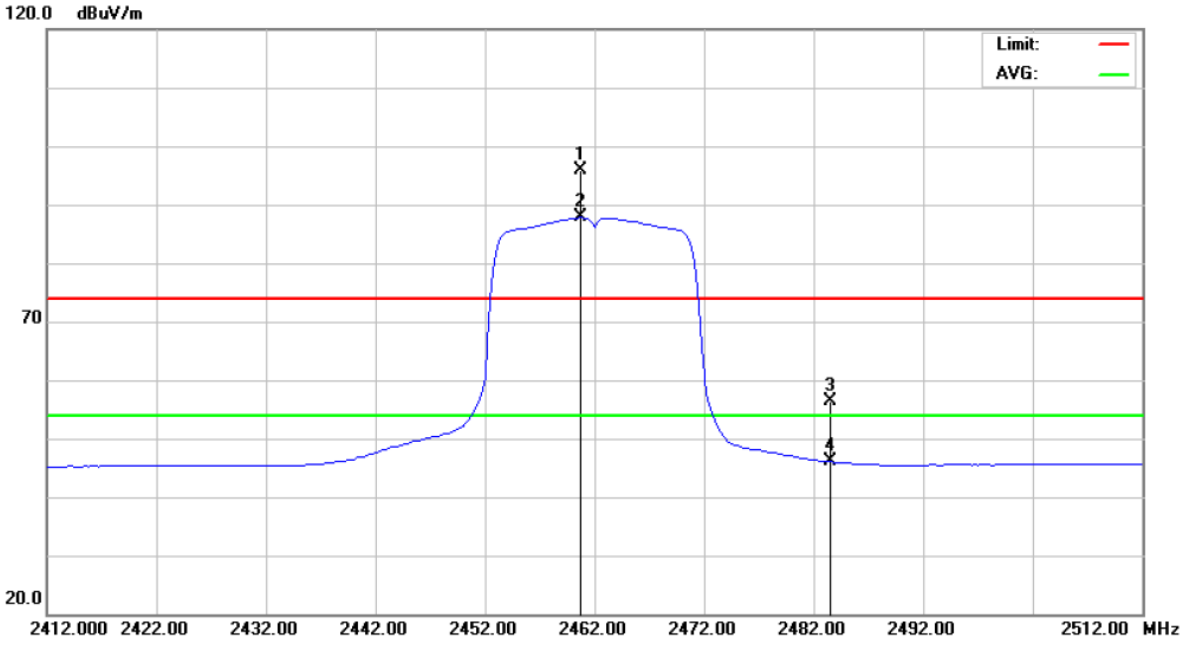
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4873.535	43.26	6.28	49.54	74.00	-24.46	peak	
2		4873.535	31.57	6.28	37.85	54.00	-16.15	AVG	
3		7311.135	43.15	12.77	55.92	74.00	-18.08	peak	
4	*	7311.135	31.56	12.77	44.33	54.00	-9.67	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz		

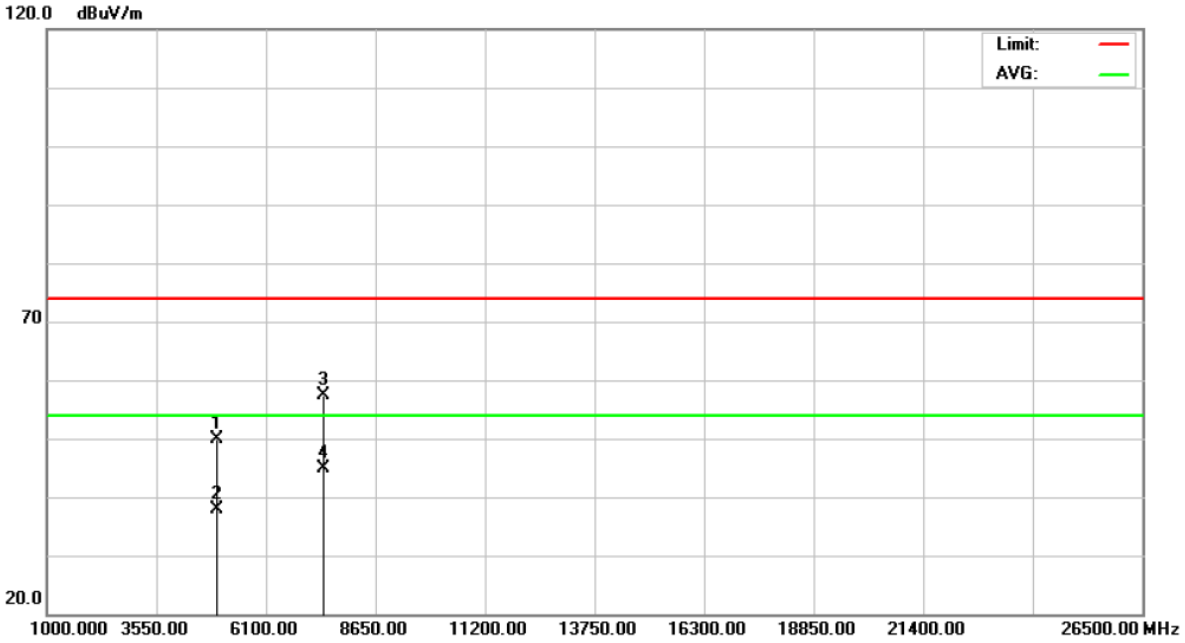
Polarization: Vertical



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	63.85	32.10	95.95	74.00	21.95	peak	
2	*	2460.750	55.74	32.10	87.84	54.00	33.84	AVG	
3		2483.500	24.30	32.19	56.49	74.00	-17.51	peak	
4		2483.500	13.86	32.19	46.05	54.00	-7.95	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz		

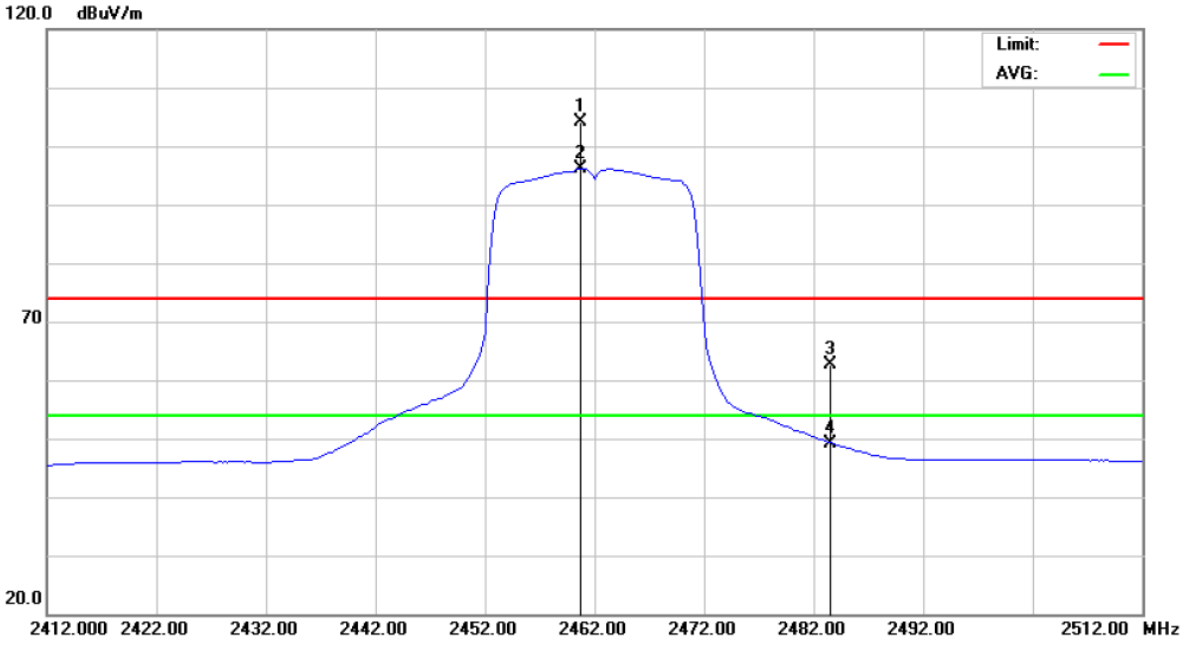
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4923.930	43.66	6.34	50.00	74.00	-24.00	peak	
2		4923.930	31.61	6.34	37.95	54.00	-16.05	AVG	
3		7385.970	44.22	13.05	57.27	74.00	-16.73	peak	
4	*	7385.970	31.93	13.05	44.98	54.00	-9.02	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz		

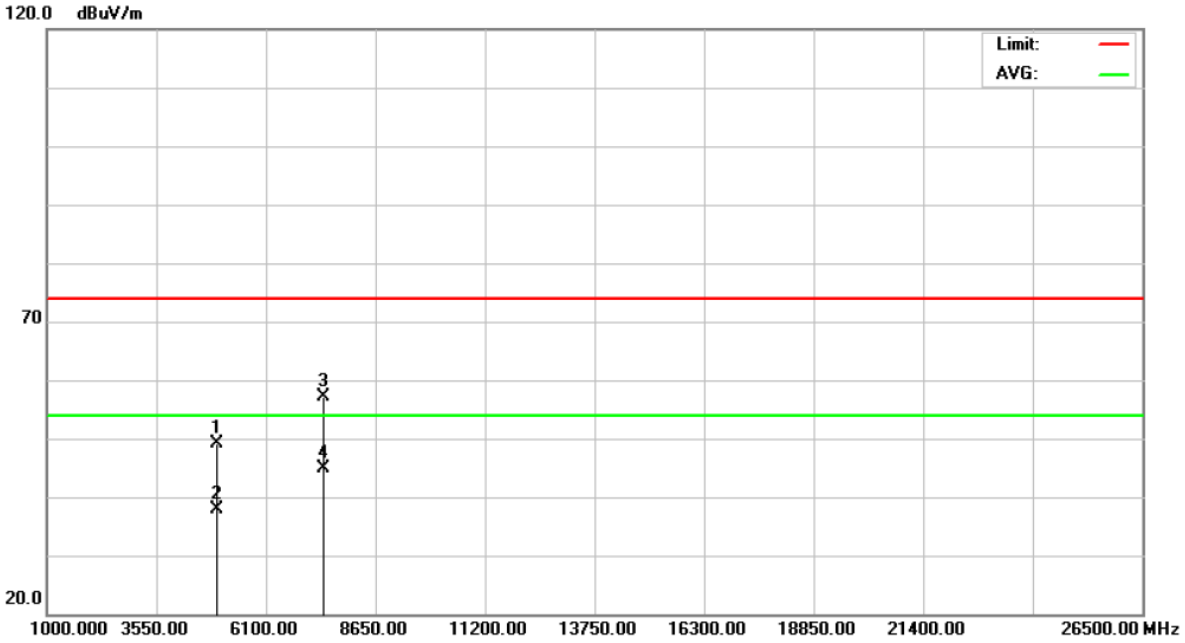
Polarization: Horizontal



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	72.10	32.10	104.20	74.00	30.20	peak	
2	*	2460.750	63.97	32.10	96.07	54.00	42.07	AVG	
3		2483.500	30.55	32.19	62.74	74.00	-11.26	peak	
4		2483.500	17.06	32.19	49.25	54.00	-4.75	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2462 MHz		

Polarization: Horizontal

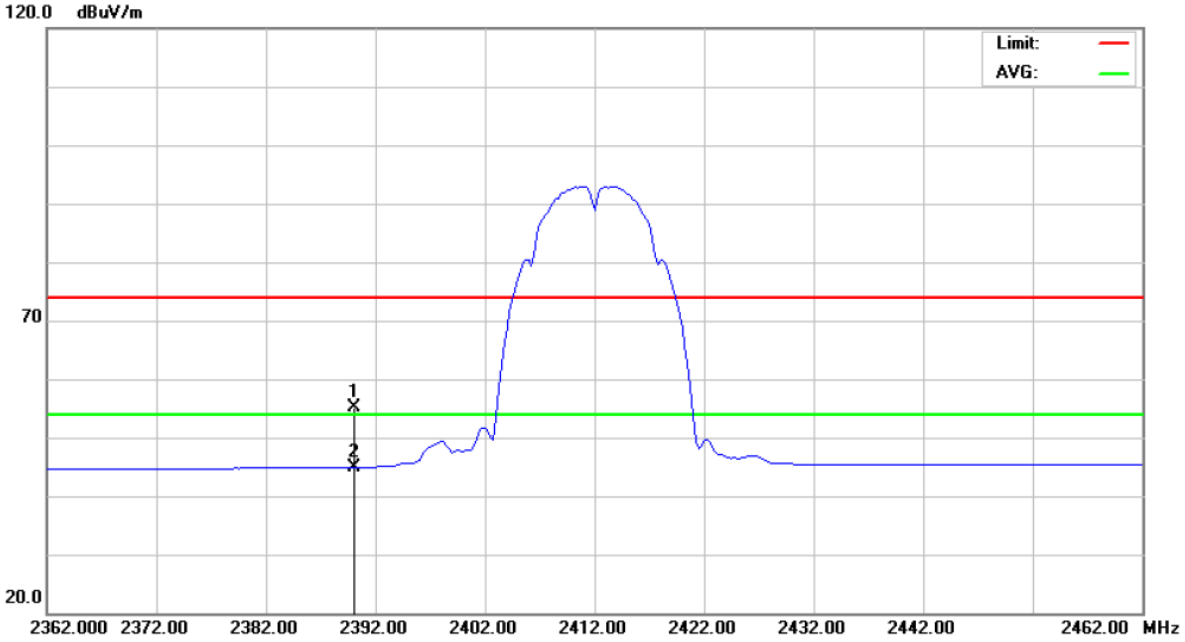


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4924.310	42.71	6.34	49.05	74.00	-24.95	peak	
2		4924.310	31.48	6.34	37.82	54.00	-16.18	AVG	
3		7386.060	44.12	13.05	57.17	74.00	-16.83	peak	
4	*	7386.060	31.94	13.05	44.99	54.00	-9.01	AVG	

9.9 TEST RESULTS (RESTRICTED BANDS)

EUT	Multi-functional T&A Terminal	Model Name	MT700
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.		

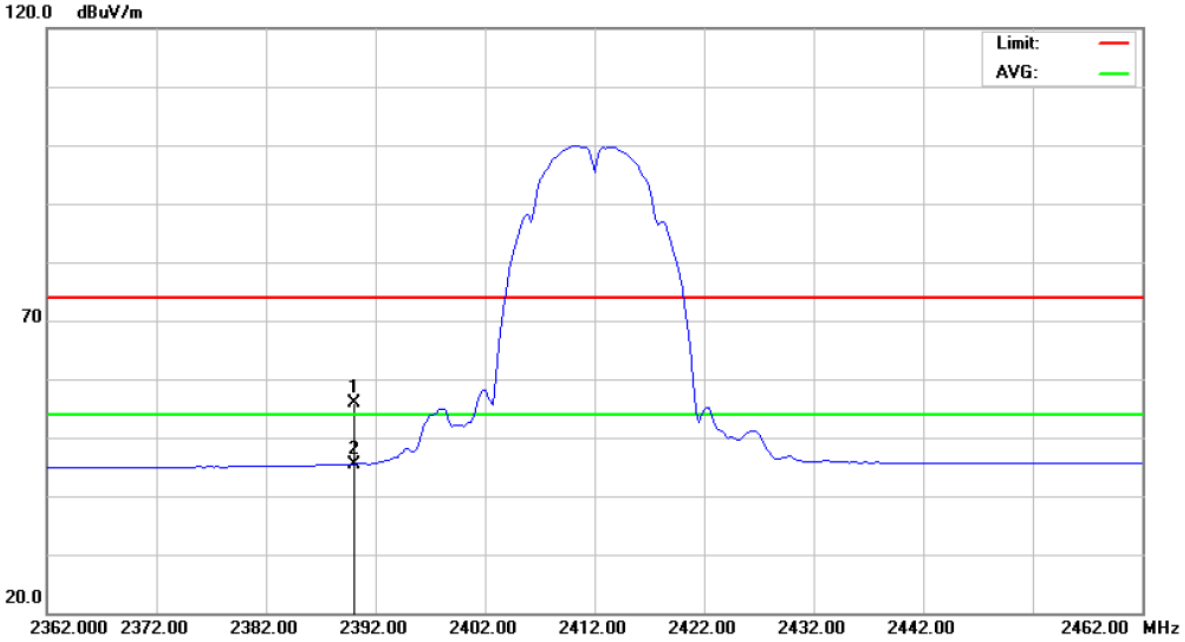
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	23.35	31.81	55.16	74.00	-18.84	peak	
2	*	2390.000	13.13	31.81	44.94	54.00	-9.06	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
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.		

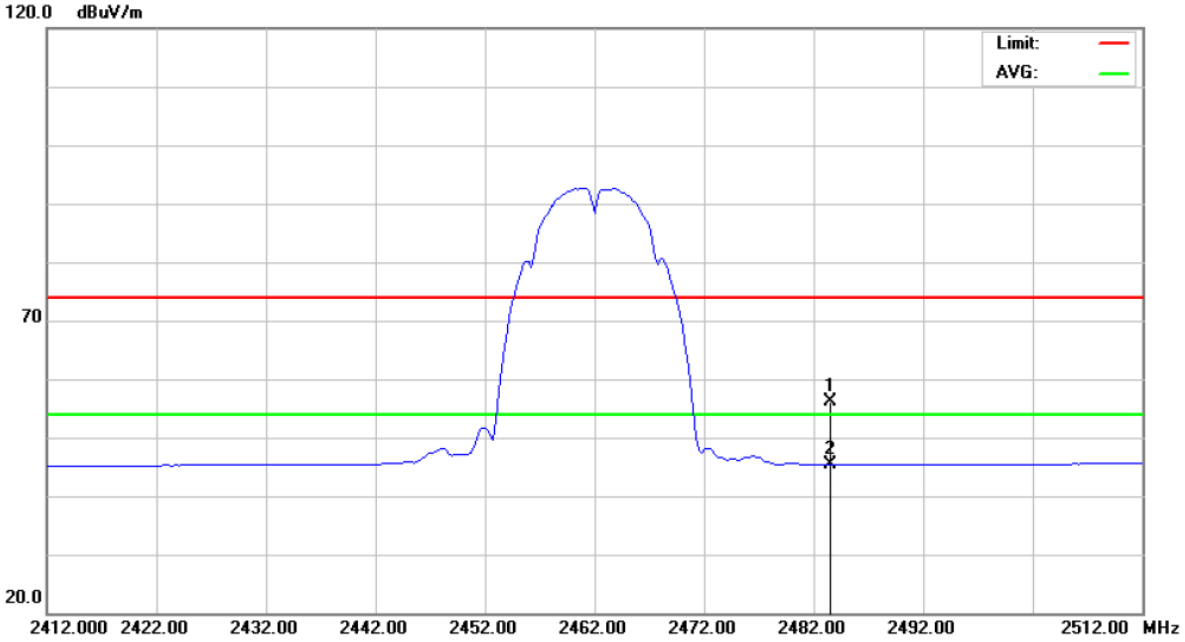
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	24.13	31.81	55.94	74.00	-18.06	peak	
2	*	2390.000	13.62	31.81	45.43	54.00	-8.57	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
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.		

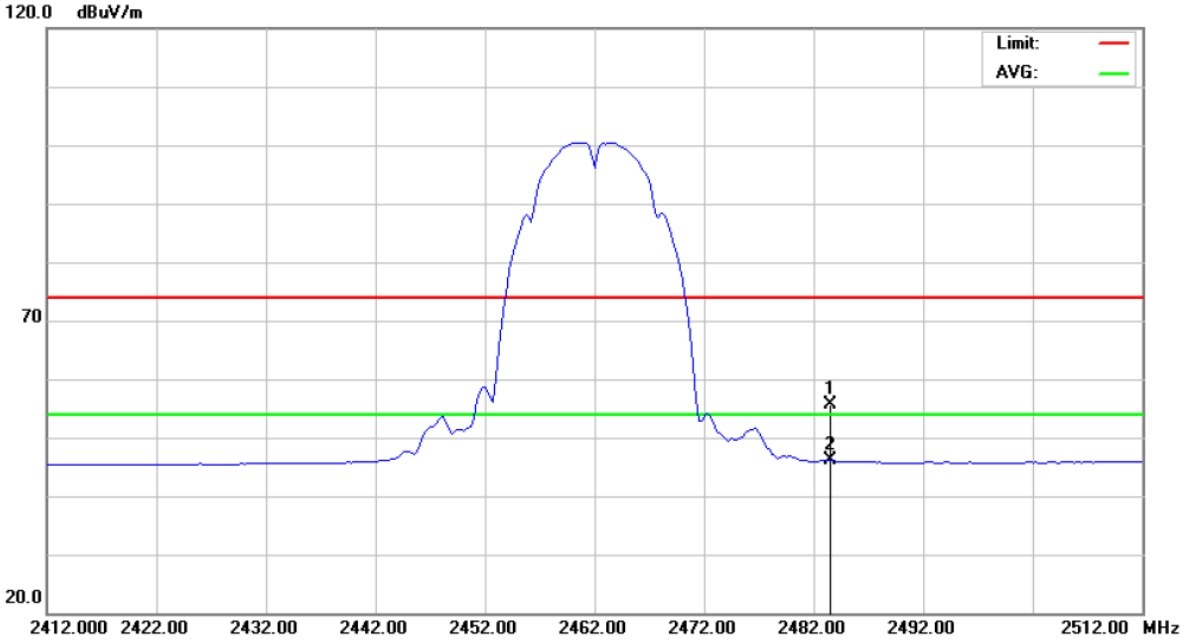
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	23.88	32.19	56.07	74.00	-17.93	peak	
2	*	2483.500	13.18	32.19	45.37	54.00	-8.63	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
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.		

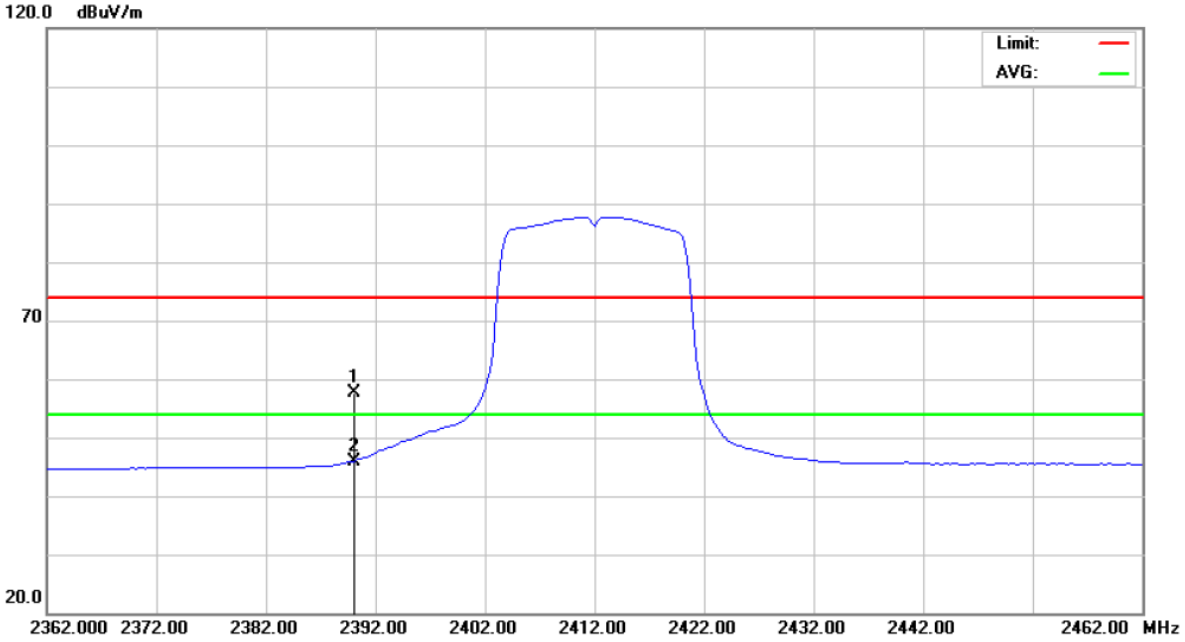
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	23.54	32.19	55.73	74.00	-18.27	peak	
2	*	2483.500	13.85	32.19	46.04	54.00	-7.96	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
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.		

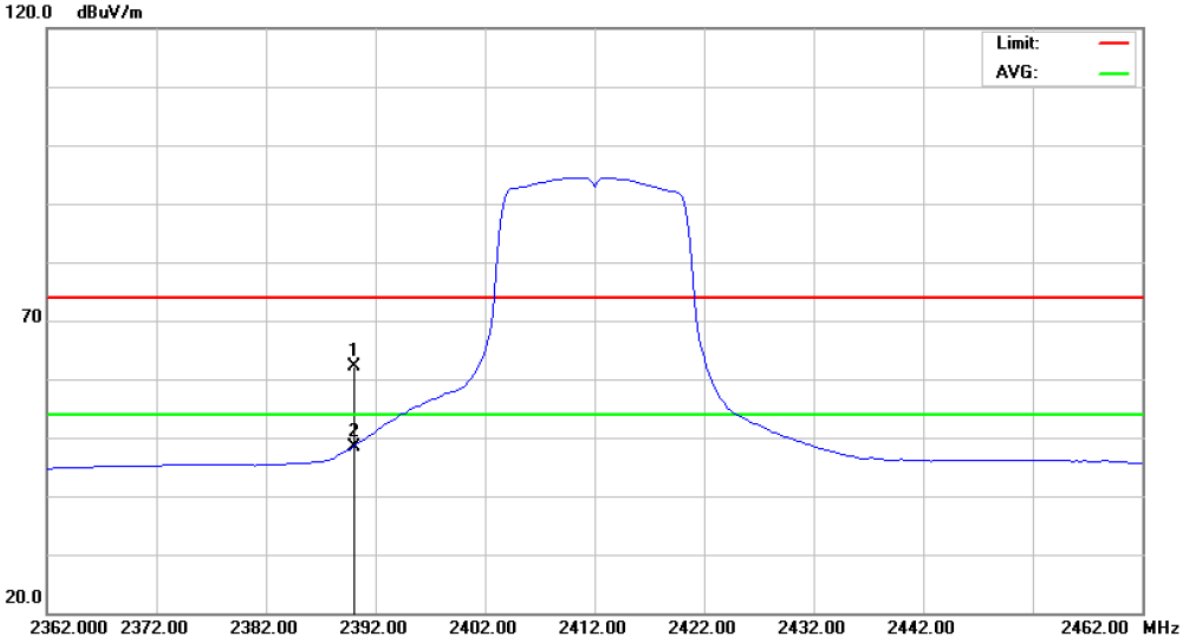
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	25.85	31.81	57.66	74.00	-16.34	peak	
2	*	2390.000	14.15	31.81	45.96	54.00	-8.04	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
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.		

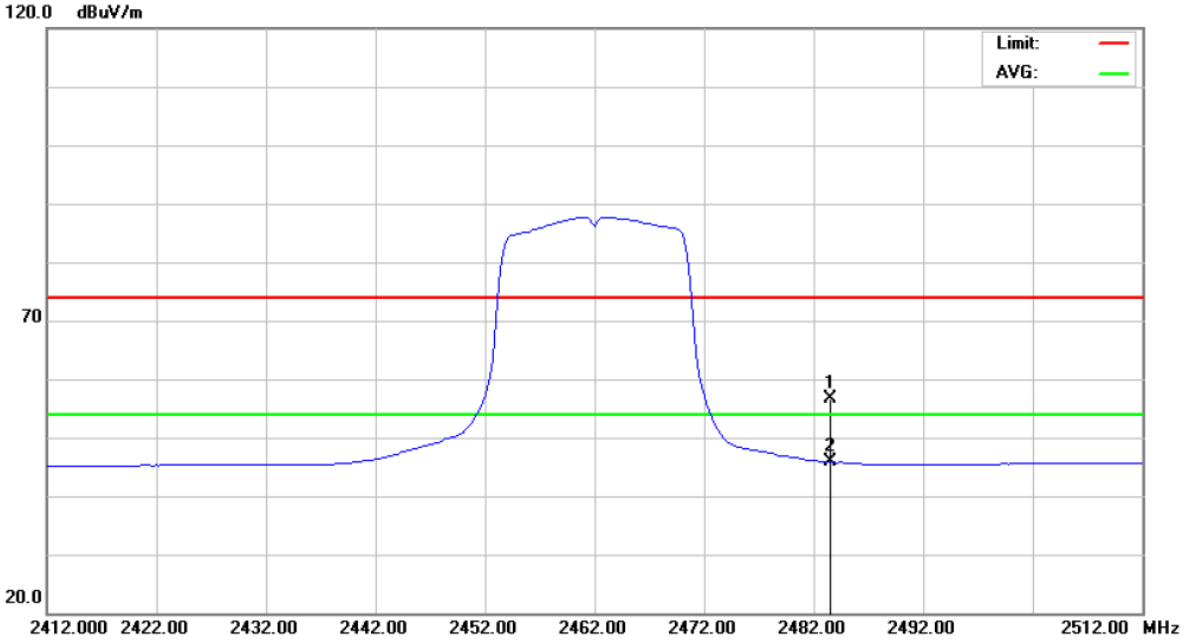
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	30.25	31.81	62.06	74.00	-11.94	peak	
2	*	2390.000	16.66	31.81	48.47	54.00	-5.53	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
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.		

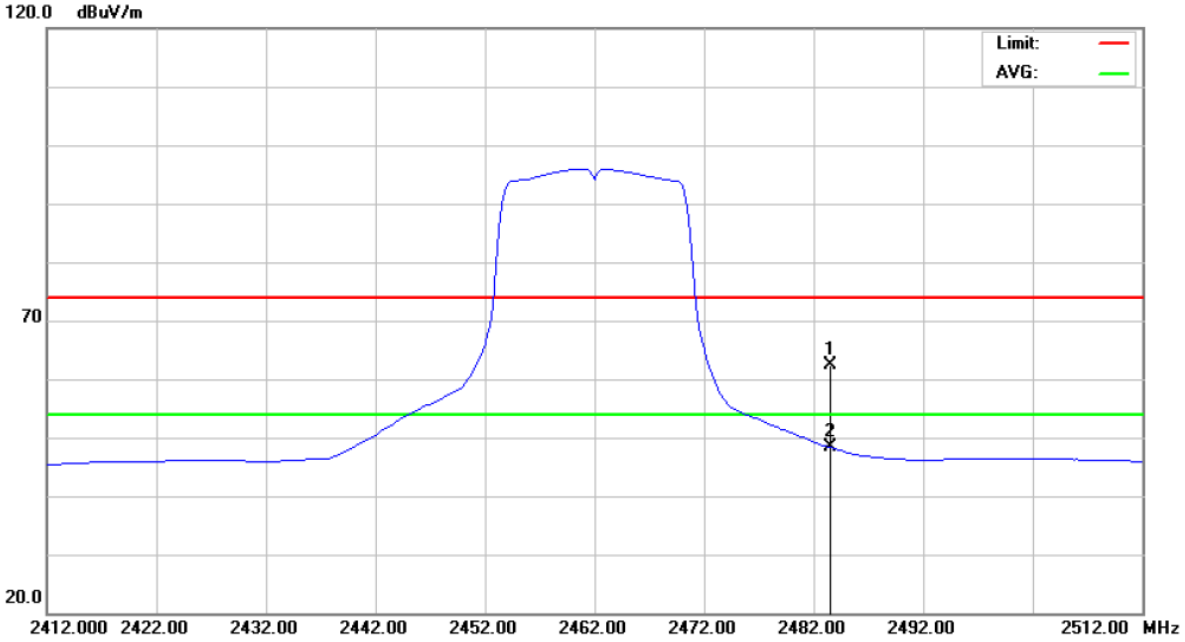
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	24.41	32.19	56.60	74.00	-17.40	peak	
2	*	2483.500	13.62	32.19	45.81	54.00	-8.19	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
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.		

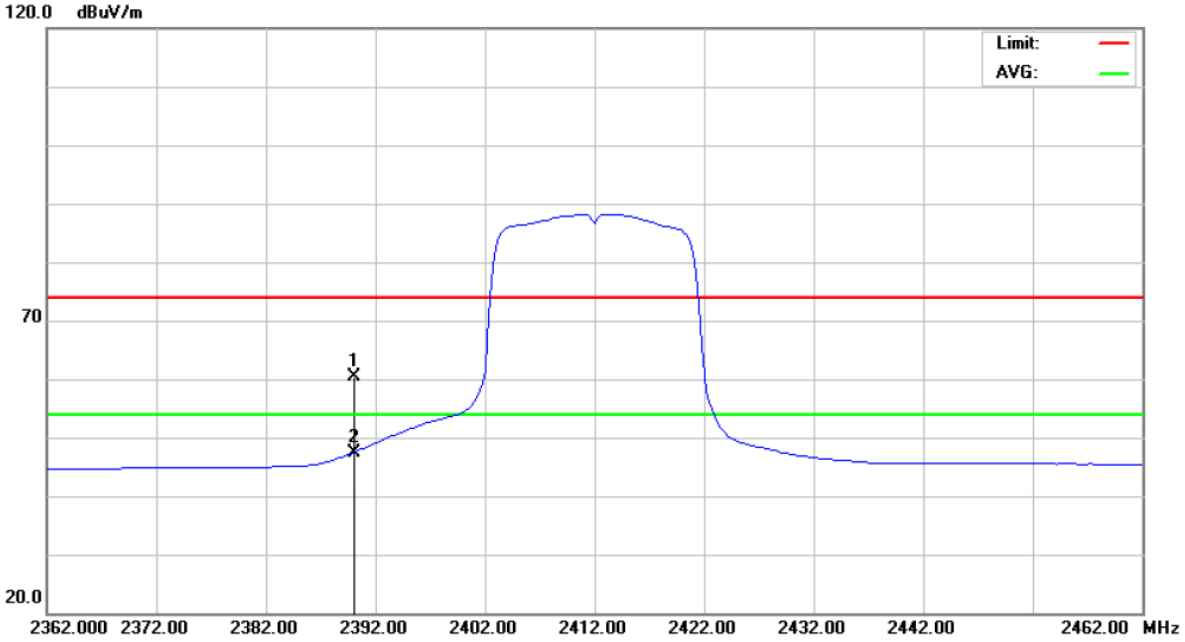
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	30.24	32.19	62.43	74.00	-11.57	peak	
2	*	2483.500	16.13	32.19	48.32	54.00	-5.68	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
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.		

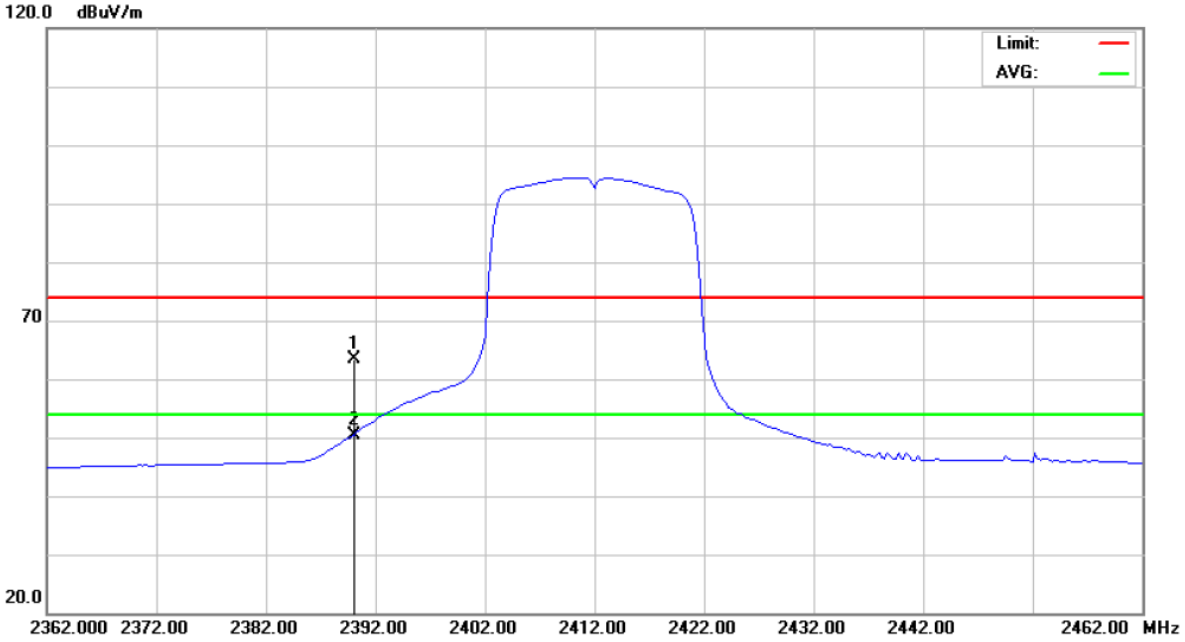
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	28.45	31.81	60.26	74.00	-13.74	peak	
2	*	2390.000	15.61	31.81	47.42	54.00	-6.58	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
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.		

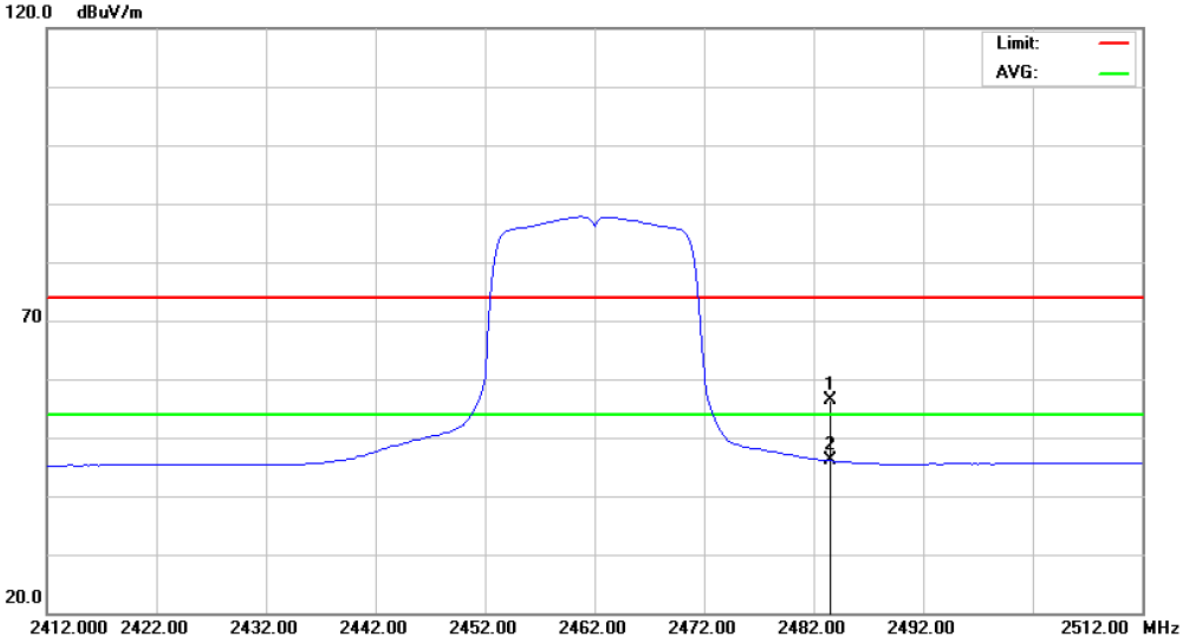
Polarization: Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	31.66	31.81	63.47	74.00	-10.53	peak	
2	*	2390.000	18.66	31.81	50.47	54.00	-3.53	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
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.		

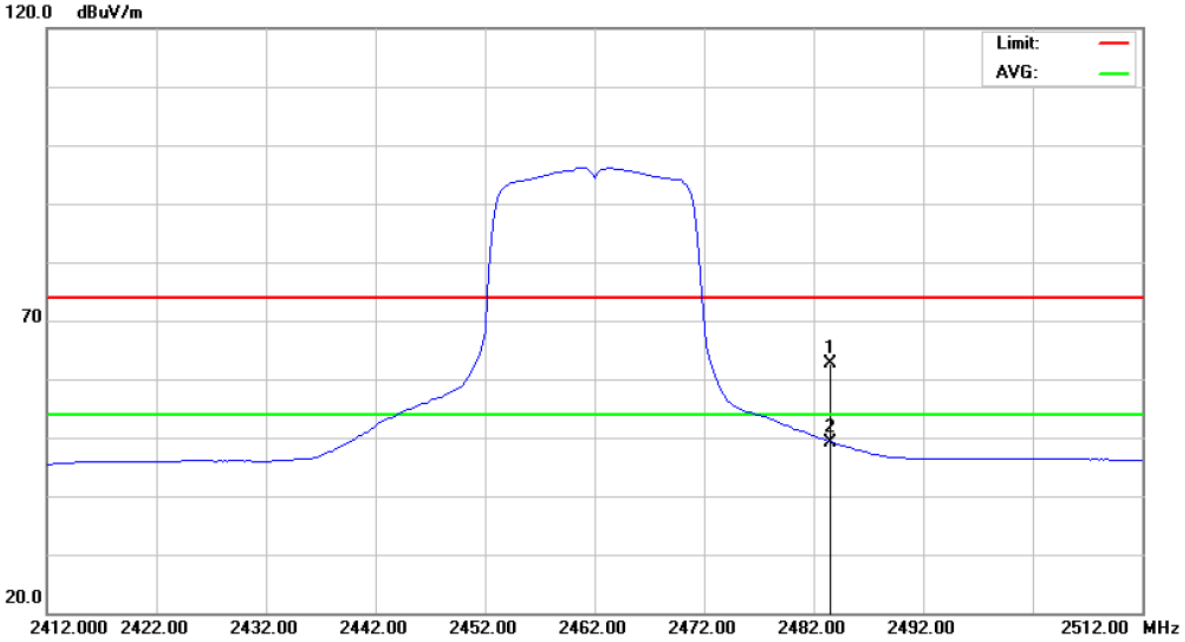
Polarization: Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2483.500	24.30	32.19	56.49	74.00	-17.51	peak	
2	*	2483.500	13.86	32.19	46.05	54.00	-7.95	AVG	

EUT	Multi-functional T&A Terminal	Model Name	MT700
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	30.55	32.19	62.74	74.00	-11.26	peak	
2	*	2483.500	17.06	32.19	49.25	54.00	-4.75	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

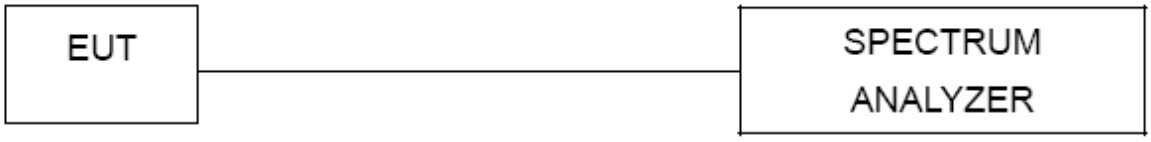
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-30	100854	Sep. 08, 2014

NOTE: **N/A**: denotes No Model Name, 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=30 kHz, Sweep time = 500s.

10.4 TEST SETUP LAYOUT



10.5 DEVIATION FROM TEST STANDARD

No deviation

10.6 EUT OPERATING CONDITIONS

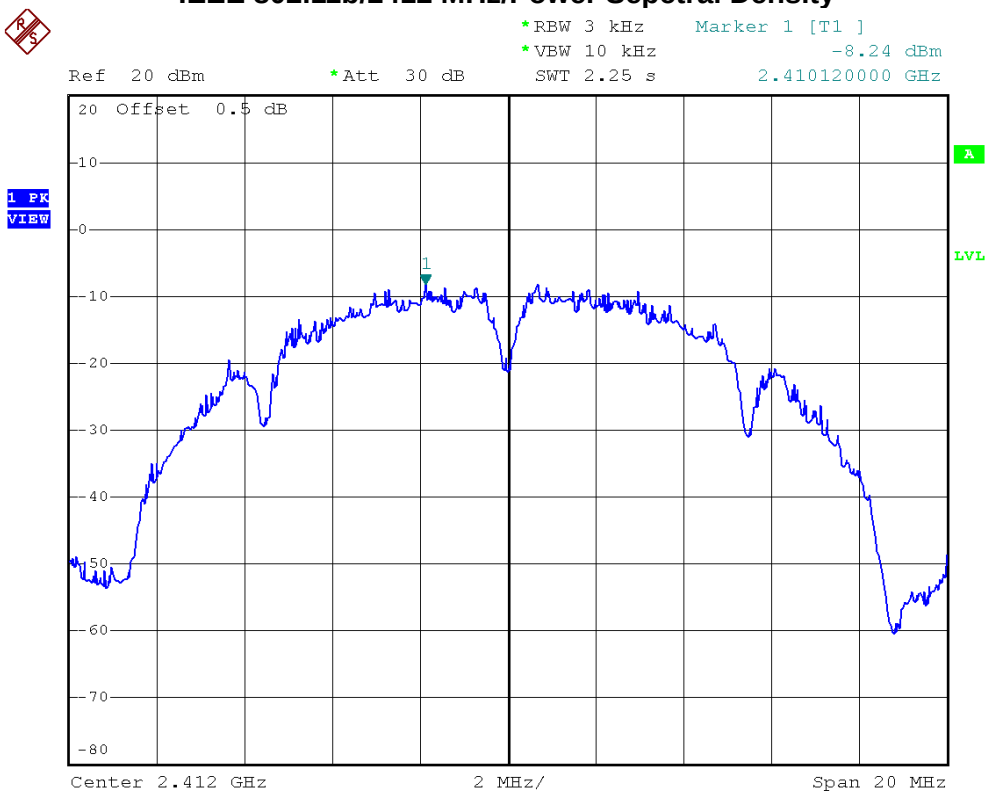
The EUT tested system was configured as the statements of 5.6 Unless otherwise a special operating condition is specified in the follows during the testing.

10.7TEST RESULTS

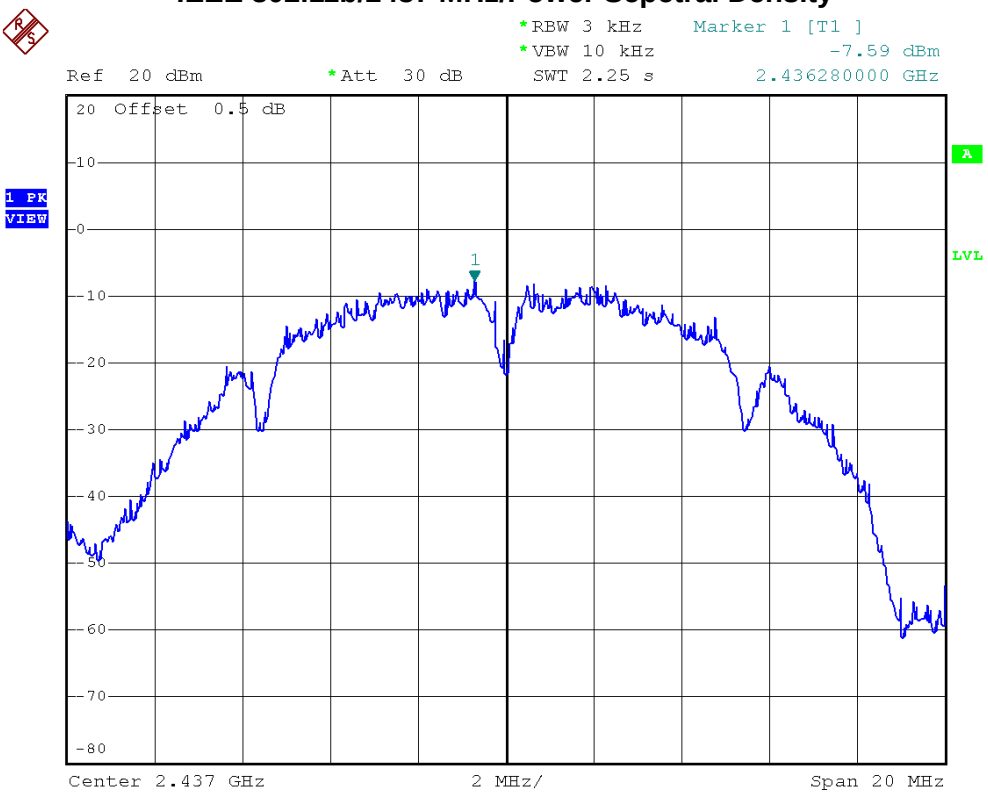
EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11b/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-8.24	8	PASS
2437 MHz	-7.59	8	PASS
2462 MHz	-5.95	8	PASS

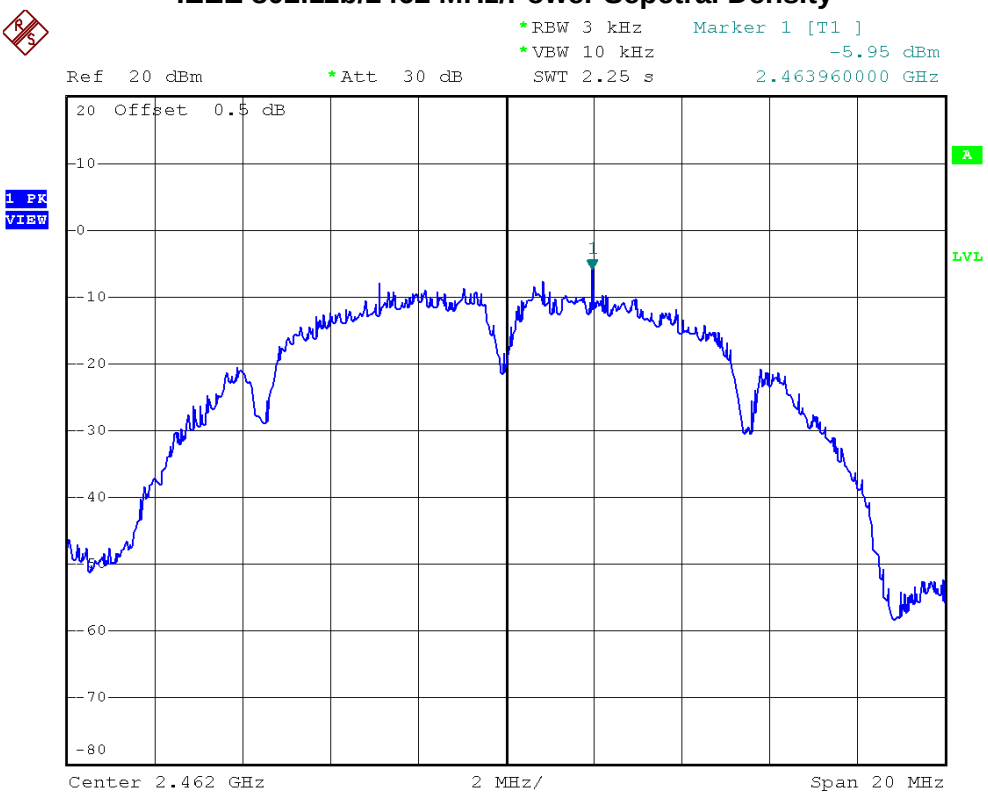
IEEE 802.11b/2412 MHz/Power Sepctral Density



IEEE 802.11b/2437 MHz/Power Sepctral Density



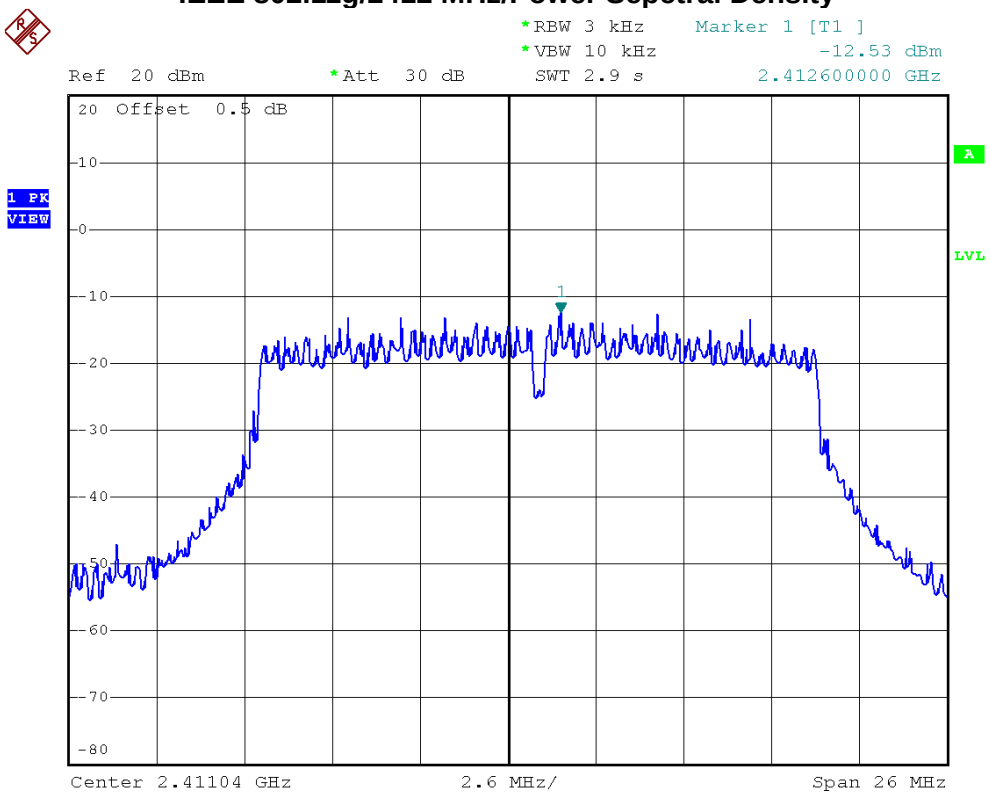
IEEE 802.11b/2462 MHz/Power Sepctral Density



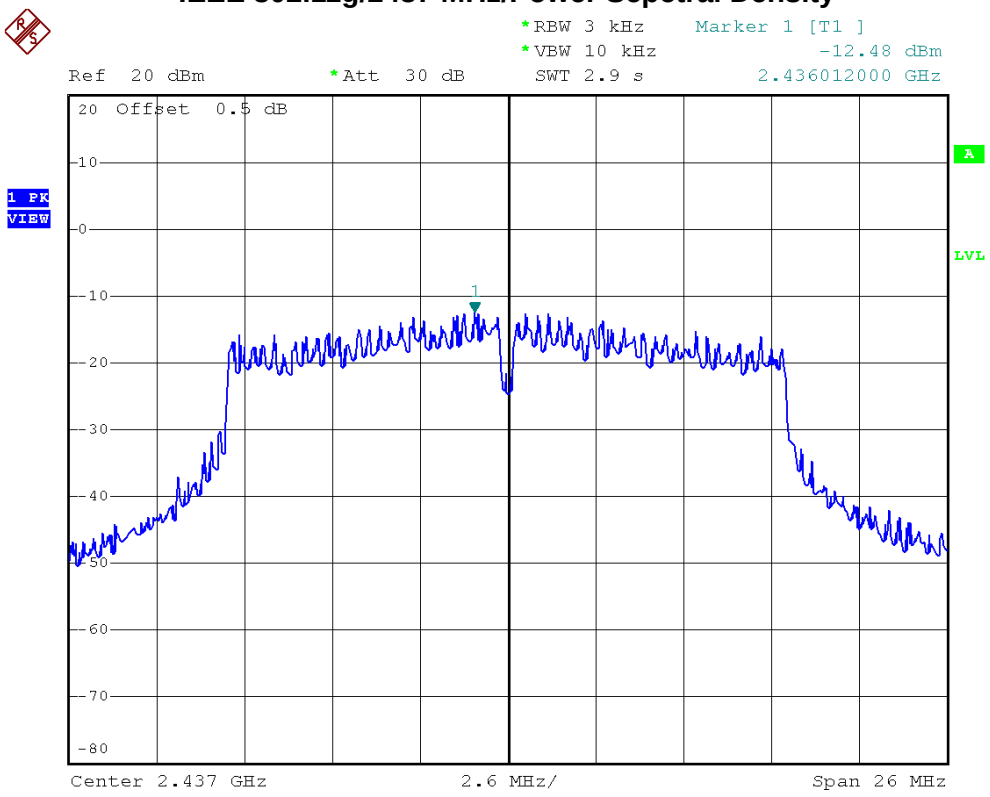
EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11g/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-12.53	8	PASS
2437 MHz	-12.48	8	PASS
2462 MHz	-12.58	8	PASS

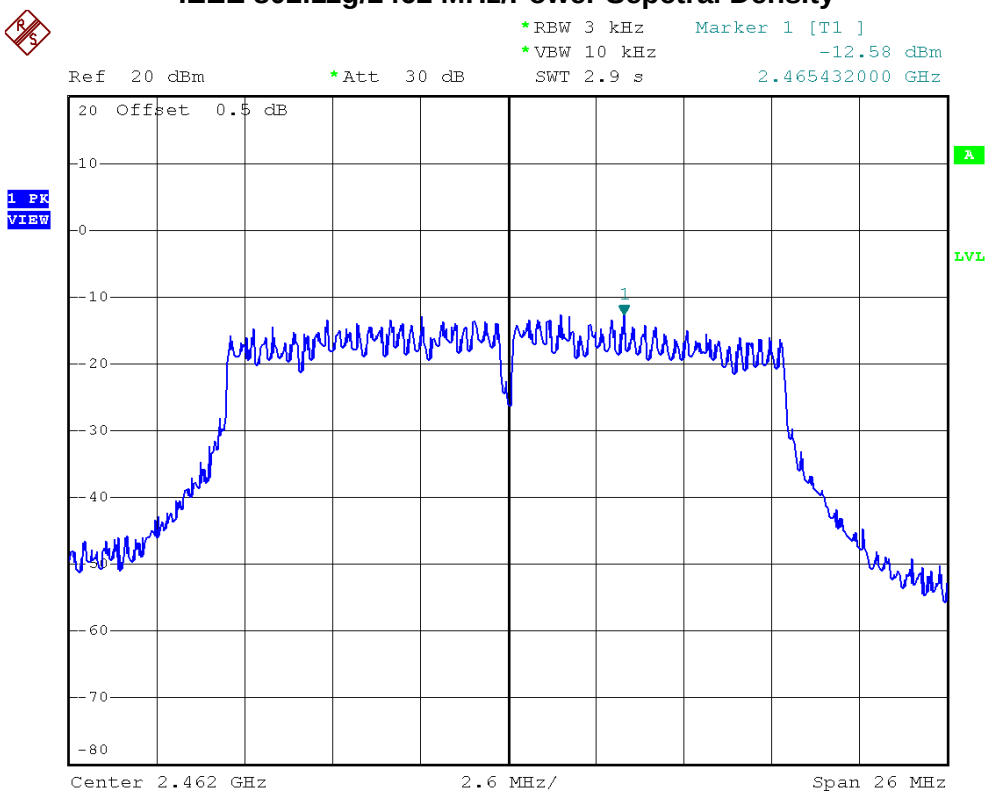
IEEE 802.11g/2412 MHz/Power Sepctral Density



IEEE 802.11g/2437 MHz/Power Sepctral Density



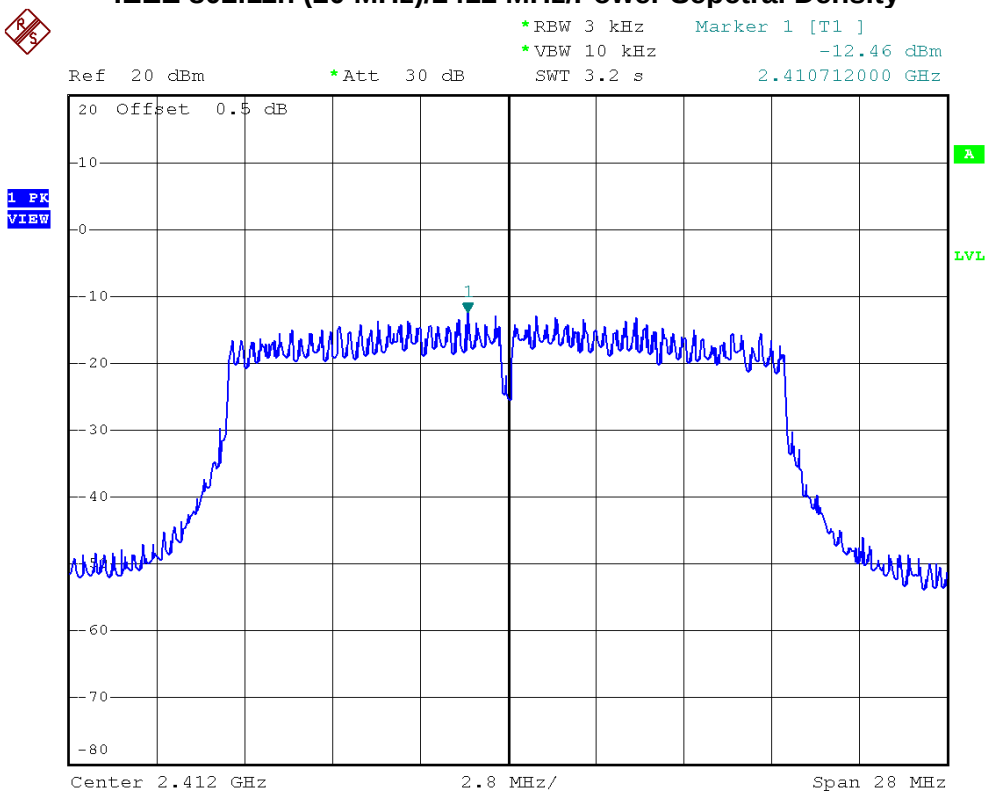
IEEE 802.11g/2462 MHz/Power Sepctral Density



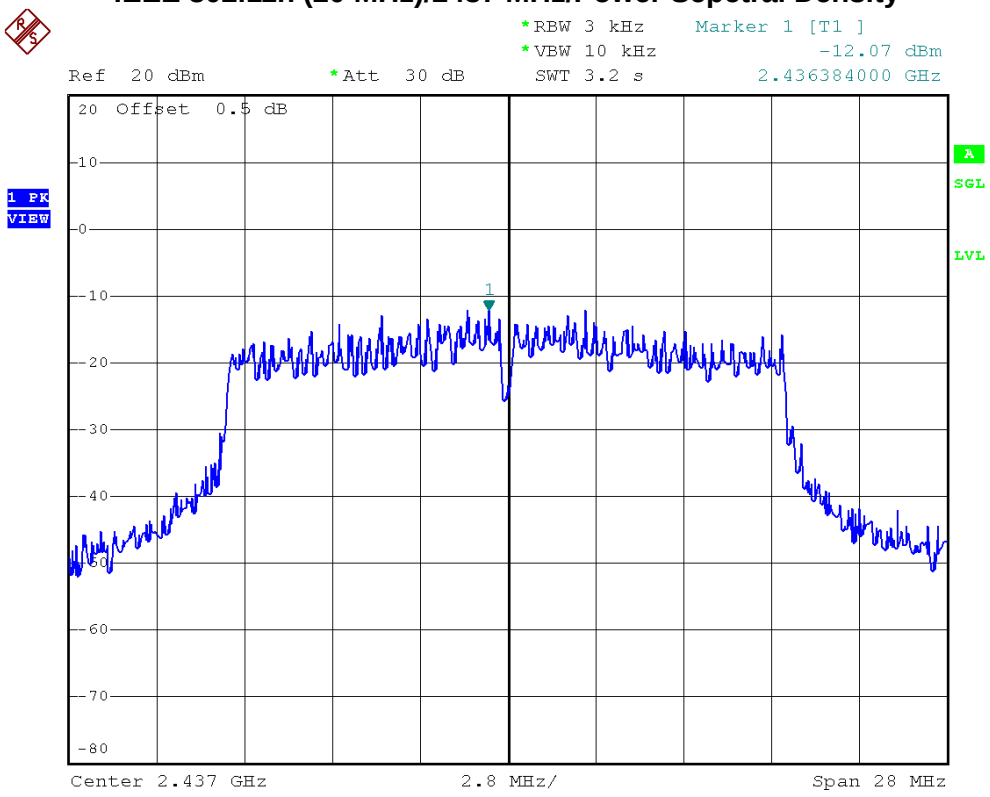
EUT	Multi-functional T&A Terminal	Model Name	MT700
Temperature	25°C	Relative Humidity	62%
Test Voltage	AC 120V/60Hz		
Test Mode	IEEE 802.11n (20 MHz)/2412 MHz, 2437 MHz, 2462 MHz		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2412 MHz	-12.46	8	PASS
2437 MHz	-12.07	8	PASS
2462 MHz	-12.71	8	PASS

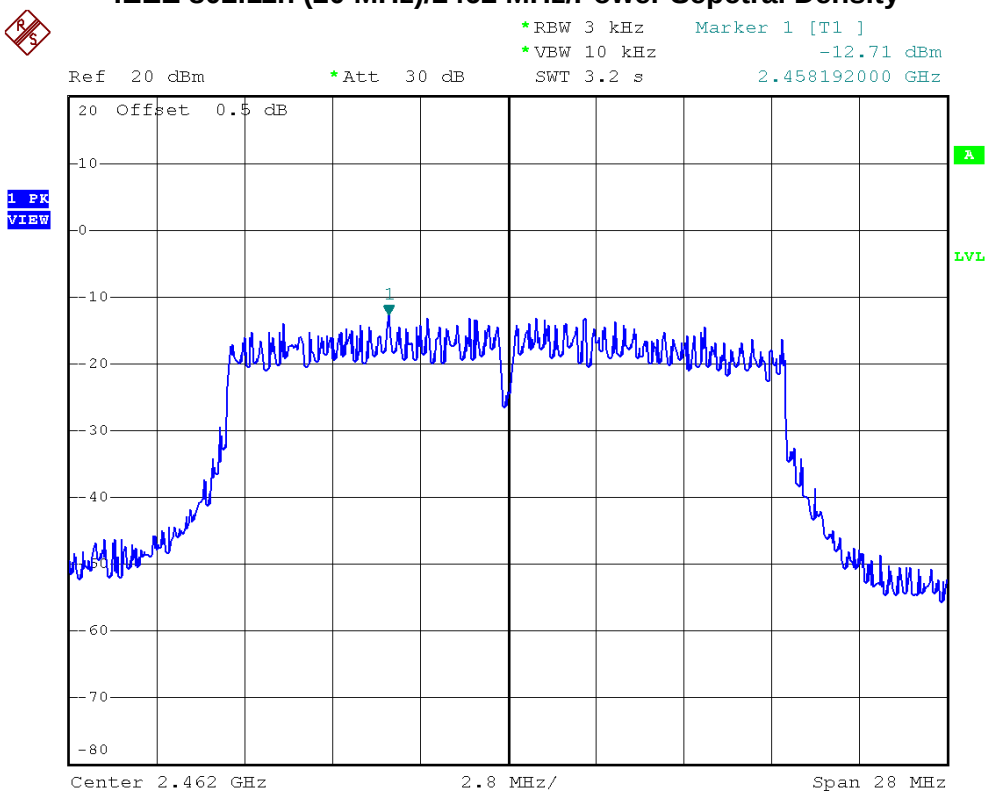
IEEE 802.11n (20 MHz)/2412 MHz/Power Sepctral Density



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

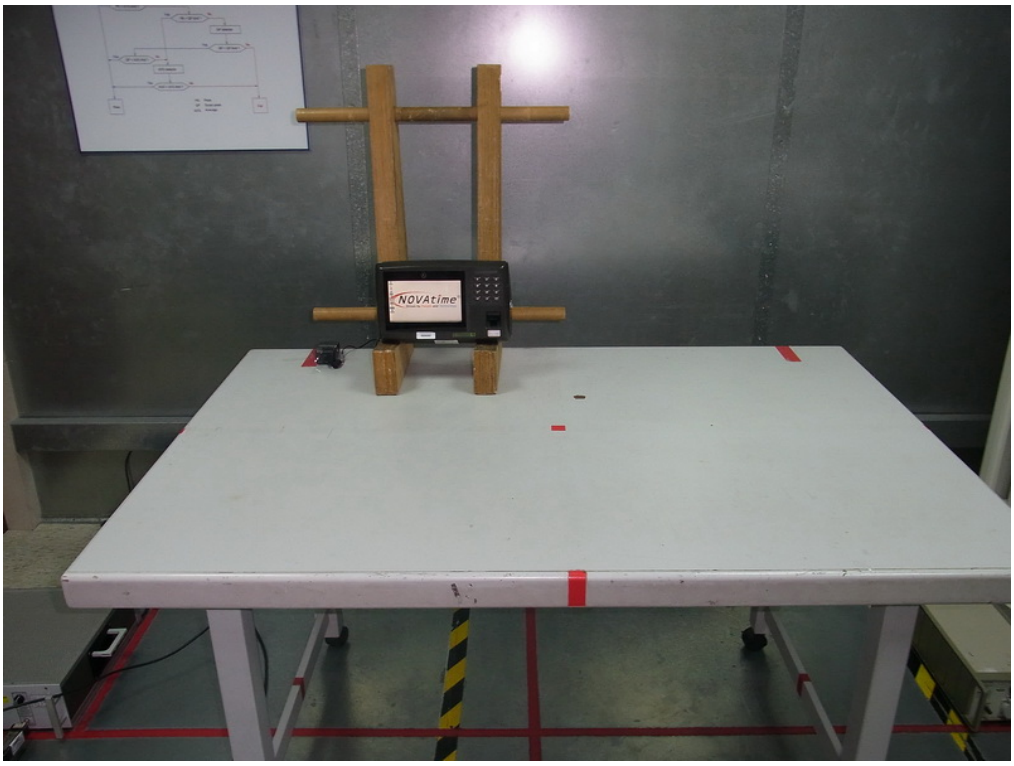


IEEE 802.11n (20 MHz)/2462 MHz/Power Sepctral Density



11 EUT TEST PHOTO

Conducted emission test photos



Radiated spurious emission test photos