

FCC Radio Test Report

FCC ID: 2AJRQ-ME300RE

Original Grant

Report No. : TB-FCC149564
Applicant : Maxeye Smart Technologies Co., Ltd.
Equipment Under Test (EUT)
EUT Name : ME300RE 1.0
Model No. : ME300RE 1.0
Series No. : N/A
Brand Name : MAXEYE
Receipt Date : 2016-08-23
Test Date : 2016-08-24 to 2016-09-09
Issue Date : 2016-09-10
Standards : FCC Part 15, Subpart C (15.247:2015)
Test Method : ANSI C63.10: 2013
Conclusions : **PASS**

In the configuration tested, the EUT complied with the standards specified above,

The EUT technically complies with the FCC and IC requirements

Test/Witness Engineer :

Ivan Su

**Approved &
Authorized**

:

Long



This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

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1. General Information about EUT

1.1 Client Information

Applicant : Maxeye Smart Technologies Co., Ltd.
Address : Room 6008, Chuangxingda Building, Xinan, Baoan, Shenzhen, P.R.C
Manufacturer : Maxeye Smart Technologies Co., Ltd.
Address : Room 6008, Chuangxingda Building, Xinan, Baoan, Shenzhen, P.R.C

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	ME300RE 1.0
Models No.	:	ME300RE 1.0
Model Difference	:	N/A
Product Description	:	Operation Frequency: 802.11b/g/n(HT20): 2412MHz~2462MHz 802.11n(HT40): 2422MHz~2452MHz
	Number of Channel:	802.11b/g/n(HT20):11 channels see note(3) 802.11n(HT40): 7 channels see note(3)
	RF Output Power:	802.11b: 22.19 dBm 802.11g: 21.94 dBm 802.11n (HT20): 21.86 dBm 802.11n (HT40): 21.78 dBm
	Antenna Gain:	4.6 dBi Dipole Antenna
	Modulation Type:	802.11b: DSSS(CCK, QPSK, BPSK) 802.11g: OFDM 802.11n: OFDM
	Bit Rate of Transmitter:	802.11b:11/5.5/2/1 Mbps 802.11g:54/48/36/24/18/12/9/6 Mbps 802.11n:up to 150Mbps
Power Supply	:	DC 5V supplied by AC/DC Adapter.
Power Rating	:	AC/DC Adapter: Input: AC 100~240V, 50/60Hz Output: DC 5V
Connecting I/O Port(S)	:	Please refer to the User's Manual

Note:

(1) This Test Report is FCC Part 15.247 for 802.11b/g/n, the test procedure follows the FCC

KDB 558074 D01 DTS Meas Guidance v03r05.

(2) For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

(3) Channel List:

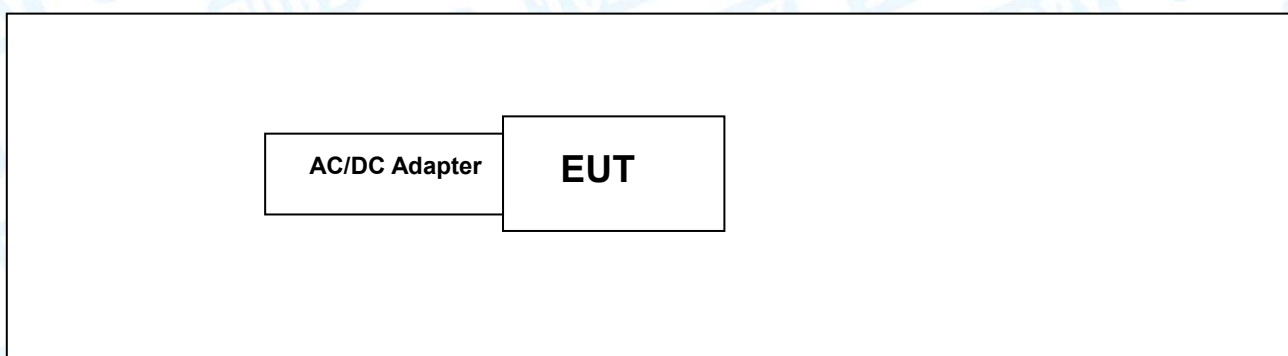
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	05	2432	09	2452
02	2417	06	2437	10	2457
03	2422	07	2442	11	2462
04	2427	08	2447		
Note:CH 01~CH 11 for 802.11b/g/n(HT20) CH 03~CH 09 for 802.11n(HT40)					

(4) Antenna information

Mode	TX Antenna (s)	Remark
802.11b	1	The worst case is ANT 1 TX
802.11g	1	The worst case is ANT 1 TX
802.11n (HT20)	2	ANT 1+ANT 2 TX
802.11n (HT40)	2	ANT 1+ANT 2 TX

1.3 Block Diagram Showing the Configuration of System Tested

TX Mode



1.4 Description of Support Units

Equipment Information				
Name	Model	S/N	Manufacturer	Used “√”
AC/DC Adapter	TEKA012	----	TEKA	√

1.5 Description of Test Mode

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 follow was evaluated respectively.

For Conducted Test	
Final Test Mode	Description
Mode 1	TX B Mode

For Radiated Test	
Final Test Mode	Description
Mode 2	TX Mode B Mode Channel 01/06/11
Mode 3	TX Mode G Mode Channel 01/06/11
Mode 4	TX Mode N(HT20) Mode Channel 01/06/11
Mode 4	TX Mode N(HT40) Mode Channel 03/06/09

Note:

- (1) For all test, we have verified the construction and function in typical operation. And all the test modes were carried out with the EUT in transmitting operation in maximum power with all kinds of data rate.

According to ANSI C63.10 standards, the measurements are performed at the highest, middle, lowest available channels, and the worst case data rate as follows:

- 802.11b Mode: CCK (1 Mbps)
- 802.11g Mode: OFDM (6 Mbps)
- 802.11n (HT20) Mode: MCS 0 (6.5 Mbps)
- 802.11n (HT40) Mode: MCS 0 (13 Mbps)

- (2) During the testing procedure, the continuously transmitting with the maximum power mode was programmed by the customer.
- (3) The EUT is considered a mobile unit; in normal use it was positioned on X-plane. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.

1.6 Description of Test Software Setting

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

Test Software: SecureCRT 7.3				
Test Mode: Continuously transmitting				
Mode	Data Rate	Channel	Parameters	
			ANT 1	ANT 2
802.11b	CCK/ 1Mbps	01	18	18
	CCK/ 1Mbps	06	18	18
	CCK/ 1Mbps	11	18	18
802.11g	OFDM/ 6Mbps	01	23	23
	OFDM/ 6Mbps	06	23	23
	OFDM/ 6Mbps	11	23	23
802.11n(20)	MCS 0	01	20	20
	MCS 0	06	20	20
	MCS 0	11	20	20
802.11n(40)	MCS 0	03	20	20
	MCS 0	06	20	20
	MCS 0	09	20	20
Note: TX signal at 802.11b/g mode only could transmit at Ant.1 or Ant. 2. all the test mode have pretest with two Antenna, but the worst case is ANT 1.The report only show the worst case.				

1.7 Measurement Uncertainty

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

Test Item	Parameters	Expanded Uncertainty (U_{Lab})
Conducted Emission	Level Accuracy: 9kHz~150kHz 150kHz to 30MHz	± 3.42 dB ± 3.42 dB
Radiated Emission	Level Accuracy: 9kHz to 30 MHz	± 4.60 dB
Radiated Emission	Level Accuracy: 30MHz to 1000 MHz	± 4.40 dB
Radiated Emission	Level Accuracy: Above 1000MHz	± 4.20 dB

1.7 Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107 Xixiang Section 467, Xixiang, Bao'an, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

CNAS (L5813)

The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

FCC List No.: (811562)

The Laboratory is listed in the United States of American Federal Communications Commission (FCC), and the registration number is 811562.

IC Registration No.: (11950A-1)

The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A-1.

2. Test Summary

FCC Part 15 Subpart C(15.247)/ RSS 247 Issue 1				
Standard Section		Test Item	Judgment	Remark
FCC	IC			
15.203	/	Antenna Requirement	PASS	N/A
15.207	RSS-GEN 7.2.4	Conducted Emission	PASS	N/A
15.205	RSS-GEN 7.2.2	Restricted Bands	PASS	N/A
15.247(a)(2)	RSS 247 5.2 (1)	6dB Bandwidth	PASS	N/A
15.247(b)	RSS 247 5.4 (4)	Peak Output Power	PASS	N/A
15.247(e)	RSS 247 5.2 (2)	Power Spectral Density	PASS	N/A
15.247(d)	RSS 247 5.5	Transmitter Radiated Spurious Emission	PASS	N/A
Note: “/” for no requirement for this test item. N/A is an abbreviation for Not Applicable.				

3. Test Equipment

Conducted Emission Test					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
EMI Test Receiver	Rohde & Schwarz	ESCI	100321	Jul. 22, 2016	Jul. 21, 2017
RF Switching Unit	Compliance Direction Systems Inc	RSU-A4	34403	Jul. 22, 2016	Jul. 21, 2017
AMN	SCHWARZBECK	NNBL 8226-2	8226-2/164	Jul. 22, 2016	Jul. 21, 2017
LISN	Rohde & Schwarz	ENV216	101131	Jul. 22, 2016	Jul. 21, 2017
Radiation Emission Test					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 22, 2016	Jul. 21, 2017
EMI Test Receiver	Rohde & Schwarz	ESPI	100010/007	Jul. 22, 2016	Jul. 21, 2017
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar. 20, 2016	Mar. 19, 2017
Bilog Antenna	ETS-LINDGREN	3142E	00117542	Mar. 20, 2016	Mar. 19, 2017
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar. 19, 2016	Mar. 18, 2017
Horn Antenna	ETS-LINDGREN	3117	00143209	Mar. 19, 2016	Mar. 18, 2017
Pre-amplifier	Sonoma	310N	185903	Mar. 20, 2016	Mar. 19, 2017
Pre-amplifier	HP	8447B	3008A00849	Mar. 26, 2016	Mar. 25, 2017
Cable	HUBER+SUHNER	100	SUCOFLEX	Mar. 26, 2016	Mar. 25, 2017
Positioning Controller	ETS-LINDGREN	2090	N/A	N/A	N/A
Antenna Conducted Emission					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Agilent	E4407B	MY45106456	Jul. 22, 2016	Jul. 21, 2017
EMI Test Receiver	Rohde & Schwarz	ESCI	100010/007	Jul. 22, 2016	Jul. 21, 2017
Power Meter	Anritsu	ML2495A	25406005	Jul. 22, 2016	Jul. 21, 2017
Power Sensor	Anritsu	ML2411B	25406005	Jul. 22, 2016	Jul. 21, 2017

4. Conducted Emission Test

4.1 Test Standard and Limit

4.1.1 Test Standard
FCC Part 15.207

4.1.2 Test Limit

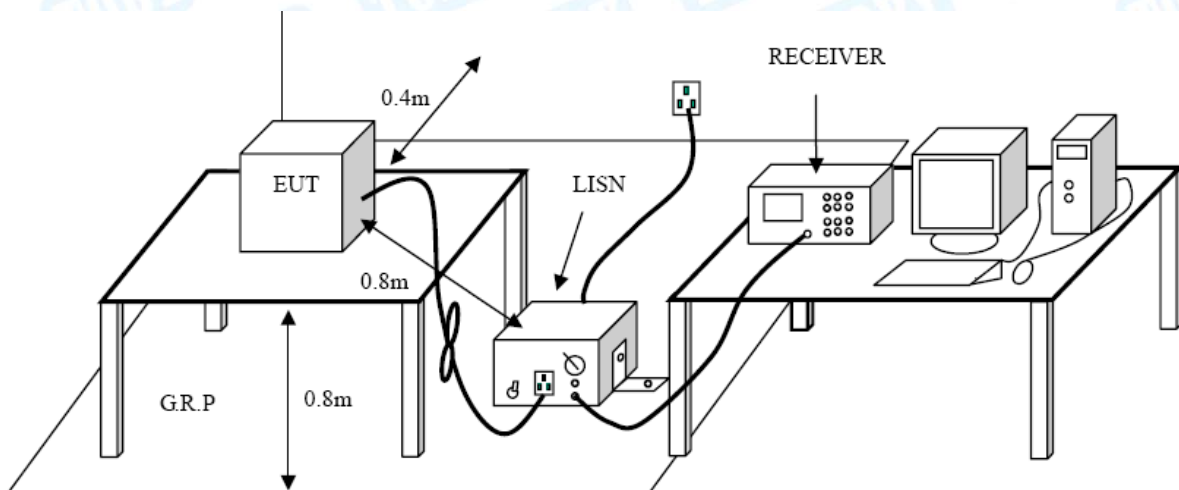
Conducted Emission Test Limit

Frequency	Maximum RF Line Voltage (dB μ V)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66 ~ 56 *	56 ~ 46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Notes:

- (1) *Decreasing linearly with logarithm of the frequency.
- (2) The lower limit shall apply at the transition frequencies.
- (3) The limit decrease in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

4.2 Test Setup



4.3 Test Procedure

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.

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.

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.

LISN at least 80 cm from nearest part of EUT chassis.

The bandwidth of EMI test receiver is set at 9kHz, and the test frequency band is from 0.15MHz to 30MHz.

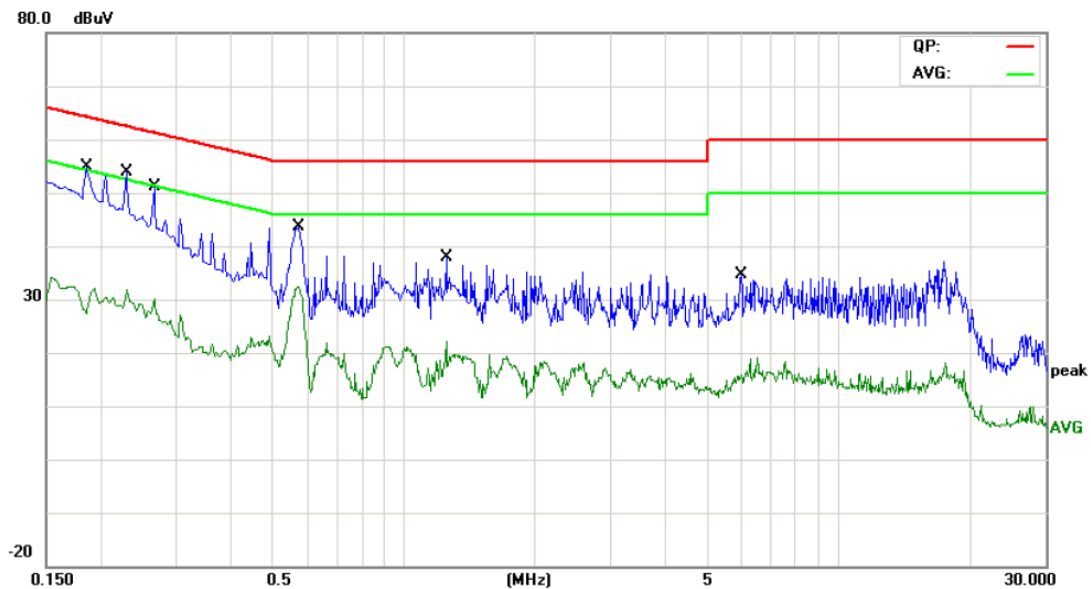
4.4 EUT Operating Mode

Please refer to the description of test mode.

4.5 Test Data

Please see the next page.

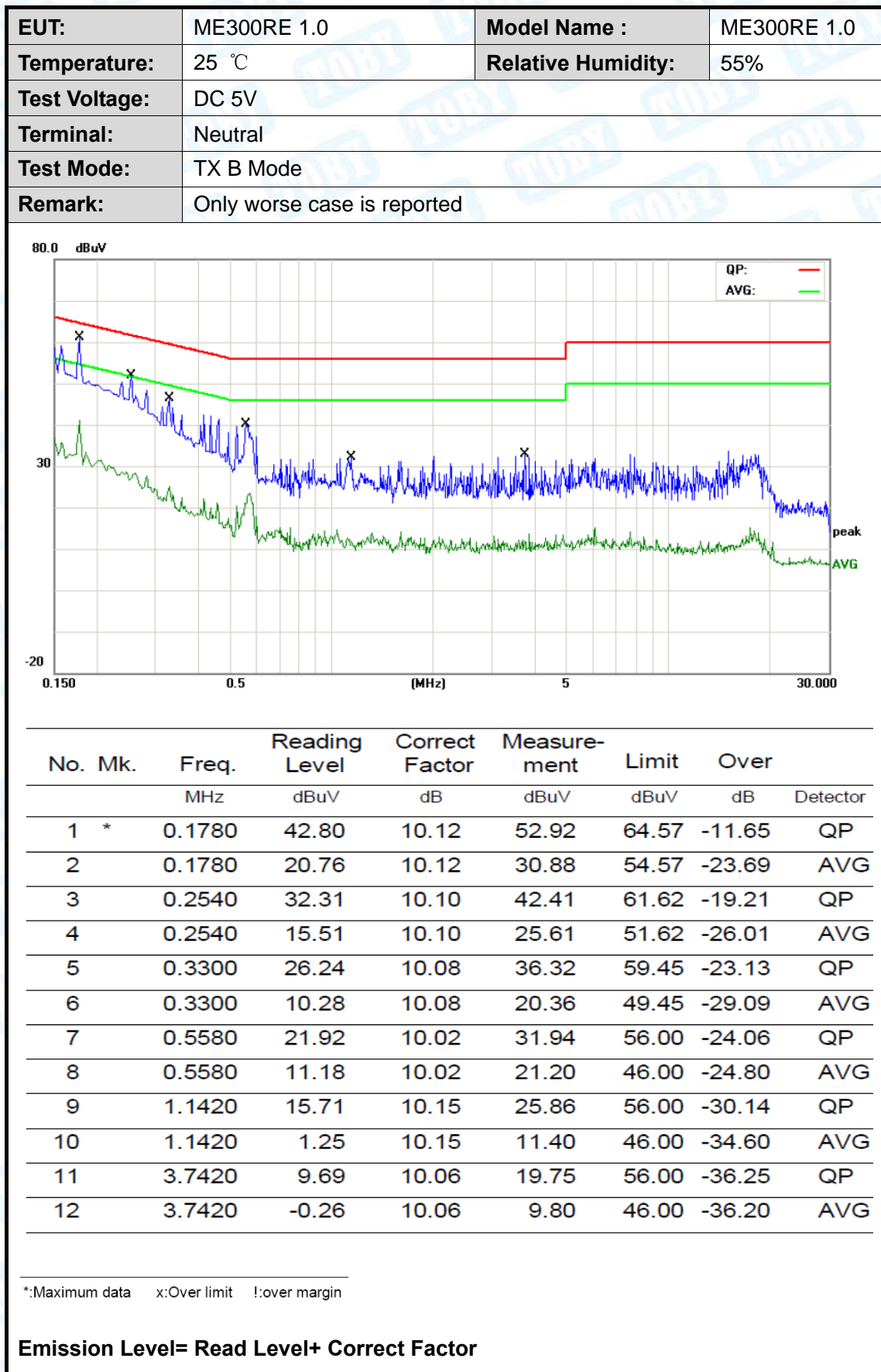
EUT:	ME300RE 1.0	Model Name :	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Terminal:	Line		
Test Mode:	TX B Mode		
Remark:	Only worse case is reported		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1860	37.09	10.12	47.21	64.21	-17.00	QP
2		0.1860	19.67	10.12	29.79	54.21	-24.42	AVG
3		0.2300	33.94	10.11	44.05	62.45	-18.40	QP
4		0.2300	18.50	10.11	28.61	52.45	-23.84	AVG
5		0.2660	32.51	10.10	42.61	61.24	-18.63	QP
6		0.2660	16.61	10.10	26.71	51.24	-24.53	AVG
7		0.5740	29.53	10.02	39.55	56.00	-16.45	QP
8	*	0.5740	21.73	10.02	31.75	46.00	-14.25	AVG
9		1.2500	17.21	10.13	27.34	56.00	-28.66	QP
10		1.2500	6.45	10.13	16.58	46.00	-29.42	AVG
11		5.9740	11.61	10.06	21.67	60.00	-38.33	QP
12		5.9740	3.55	10.06	13.61	50.00	-36.39	AVG

*:Maximum data x:Over limit !:over margin

Emission Level= Read Level+ Correct Factor



5. Radiated Emission Test

5.1 Test Standard and Limit

5.1.1 Test Standard
FCC Part 15.209

5.1.2 Test Limit

Radiated Emission Limits (9kHz~1000MHz)

Frequency (MHz)	Field Strength (microvolt/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

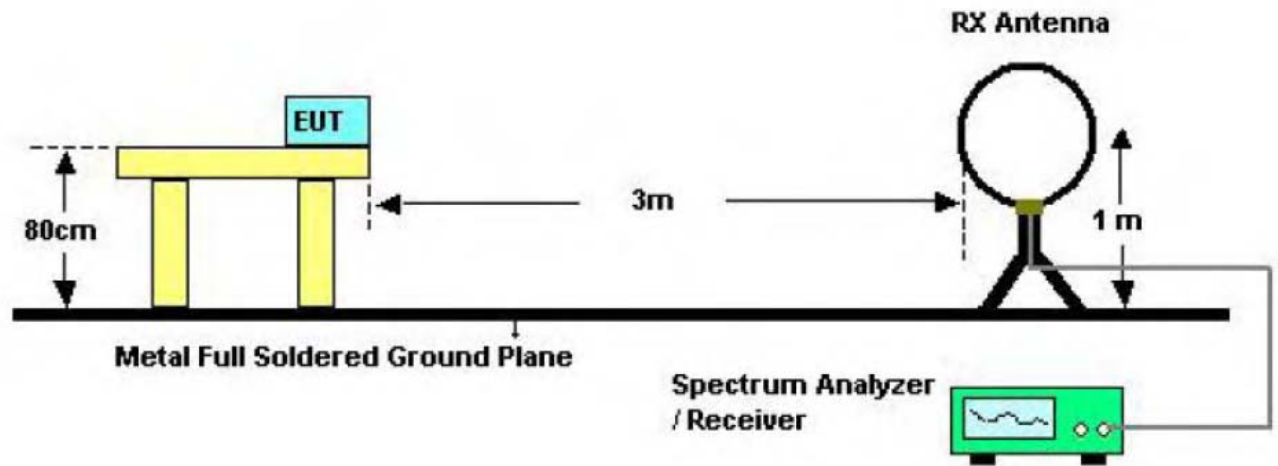
Radiated Emission Limit (Above 1000MHz)

Frequency (MHz)	Class A (dBuV/m)(at 3 M)		Class B (dBuV/m)(at 3 M)	
	Peak	Average	Peak	Average
Above 1000	80	60	74	54

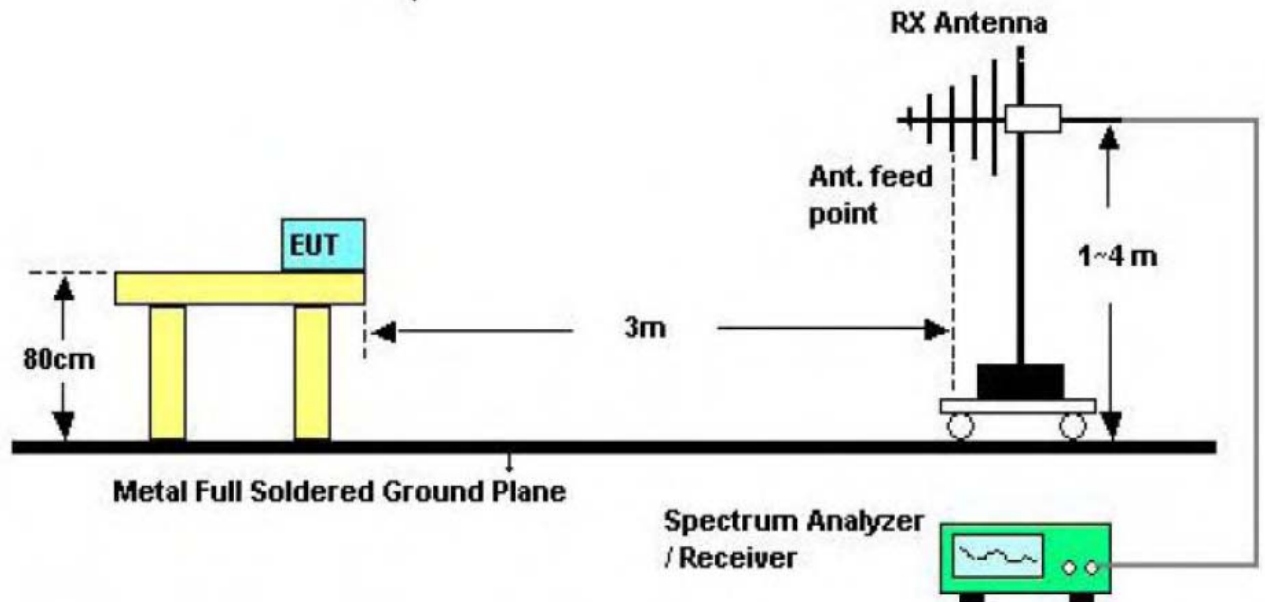
Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission Level(dBuV/m)=20log Emission Level(uV/m)

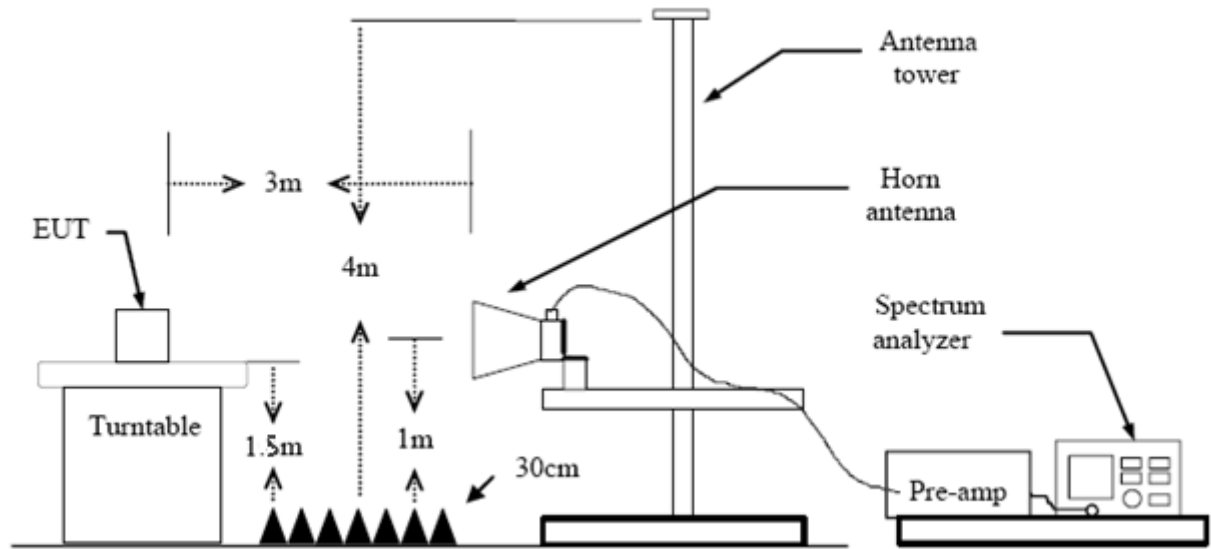
5.2 Test Setup



Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

5.3 Test Procedure

- (1) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (2) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.
- (3) 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.
- (4) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (5) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (6) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.
- (7) For the actual test configuration, please see the test setup photo.

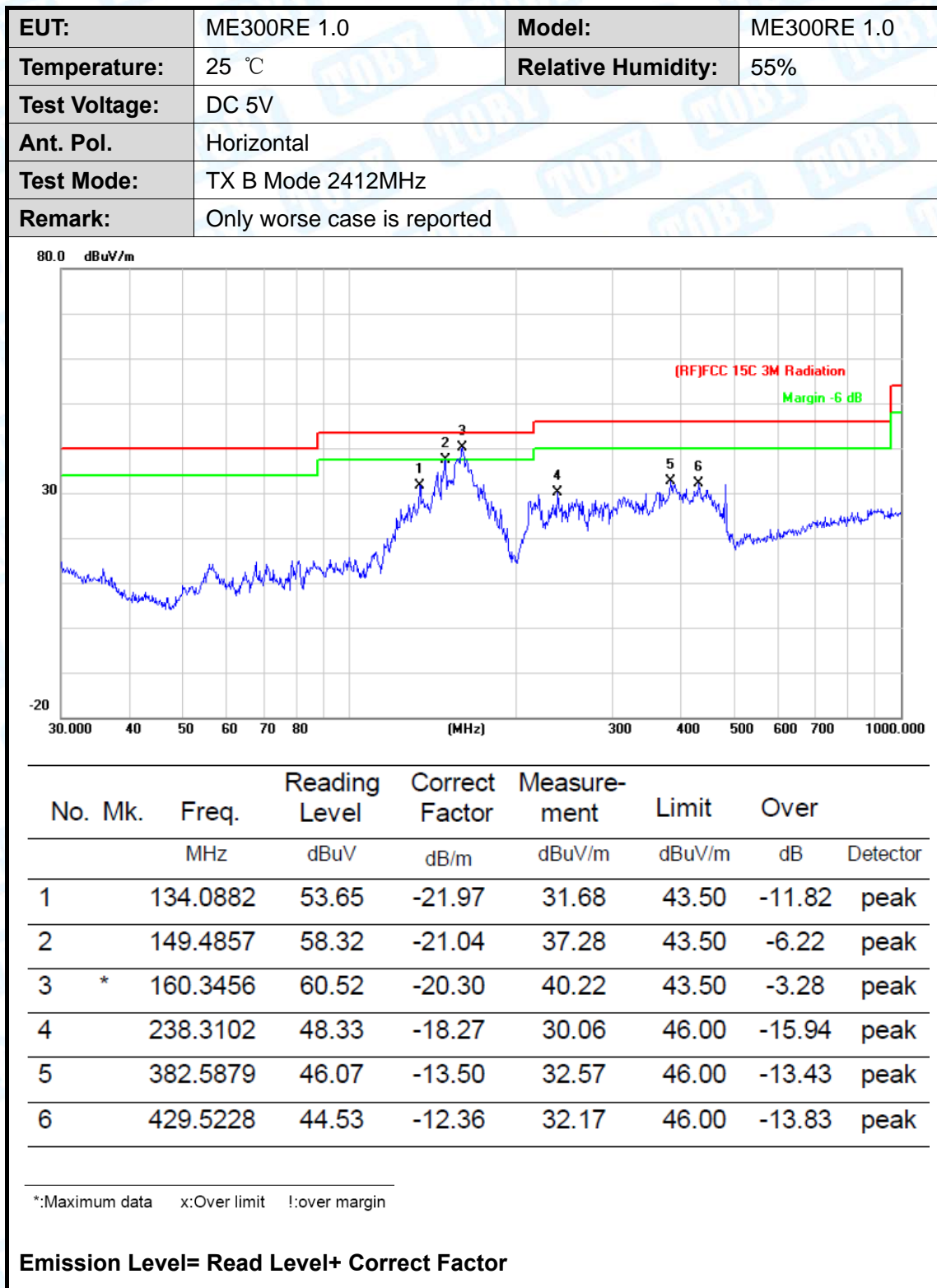
5.4 EUT Operating Condition

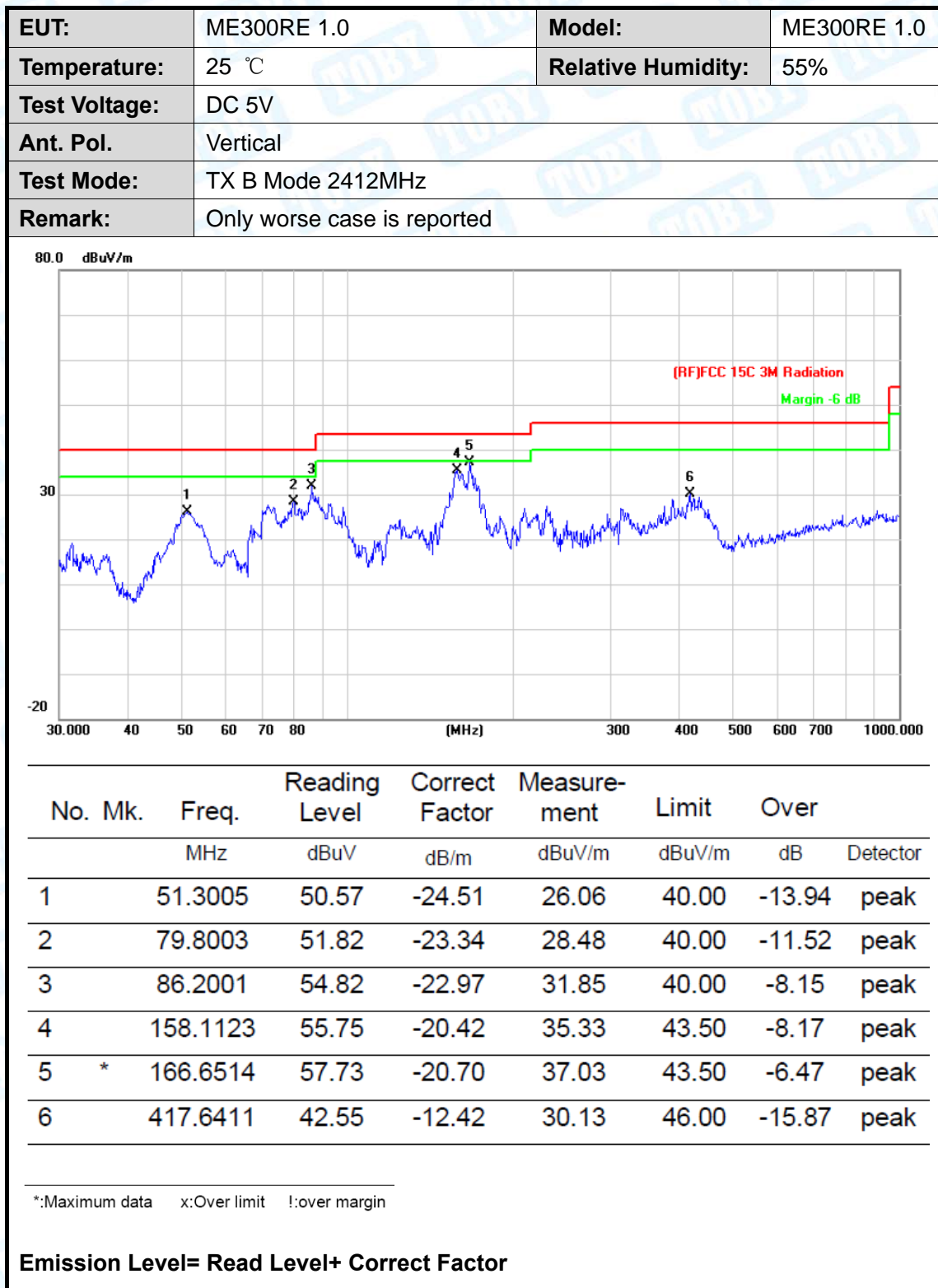
The Equipment Under Test was set to Continual Transmitting in maximum power.

5.5 Test Data

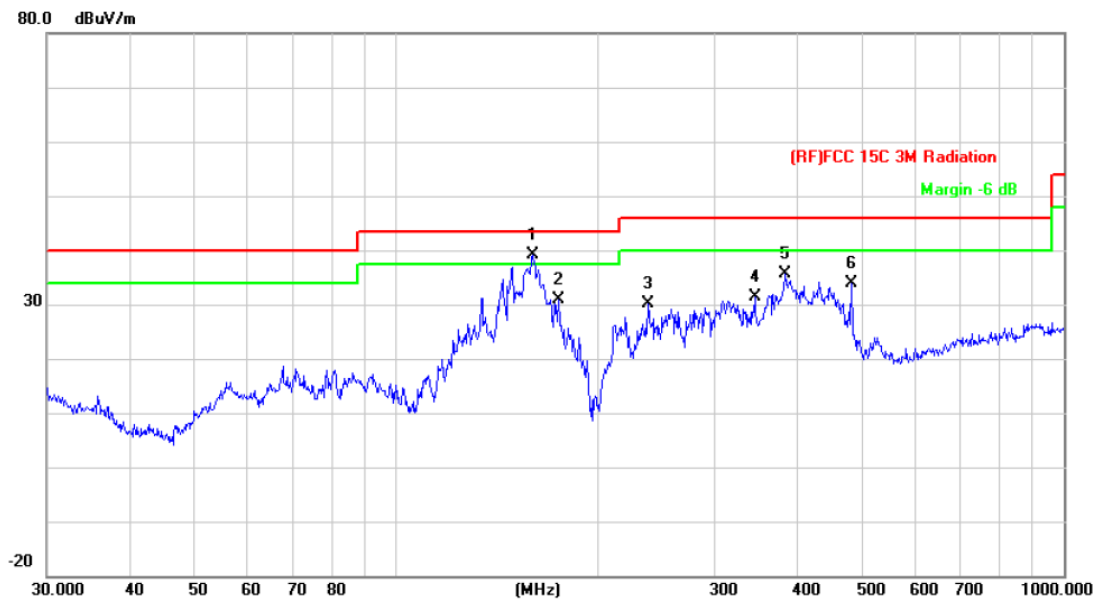
Remark: During testing above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.

Test data please refer the following pages.





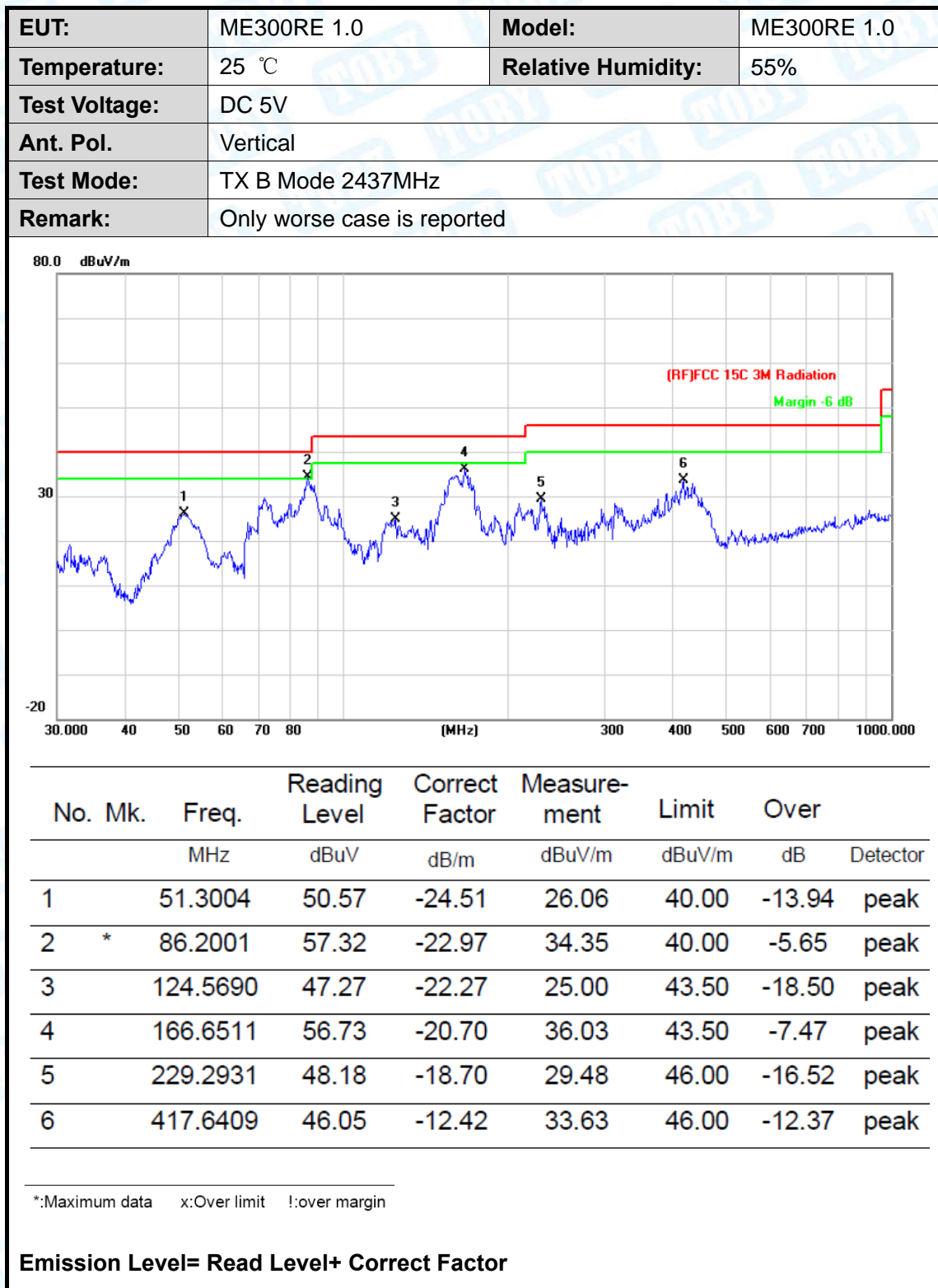
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2437MHz		
Remark:	Only worse case is reported		

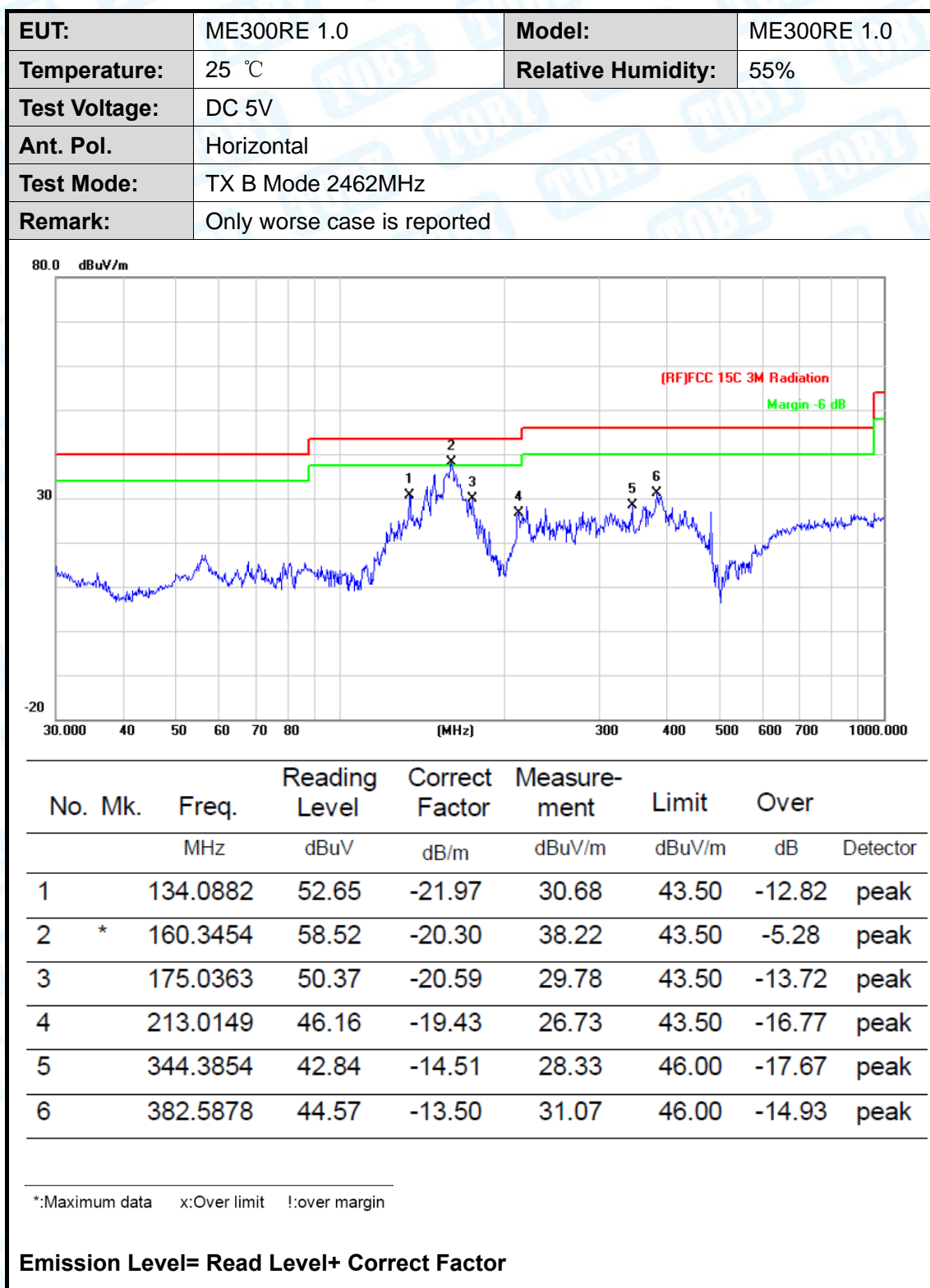


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	160.3454	59.52	-20.30	39.22	43.50	-4.28	peak
2		175.0364	51.37	-20.59	30.78	43.50	-12.72	peak
3		238.3102	48.33	-18.27	30.06	46.00	-15.94	peak
4		344.3854	45.84	-14.51	31.33	46.00	-14.67	peak
5		382.5878	49.07	-13.50	35.57	46.00	-10.43	peak
6		480.5276	45.09	-11.13	33.96	46.00	-12.04	peak

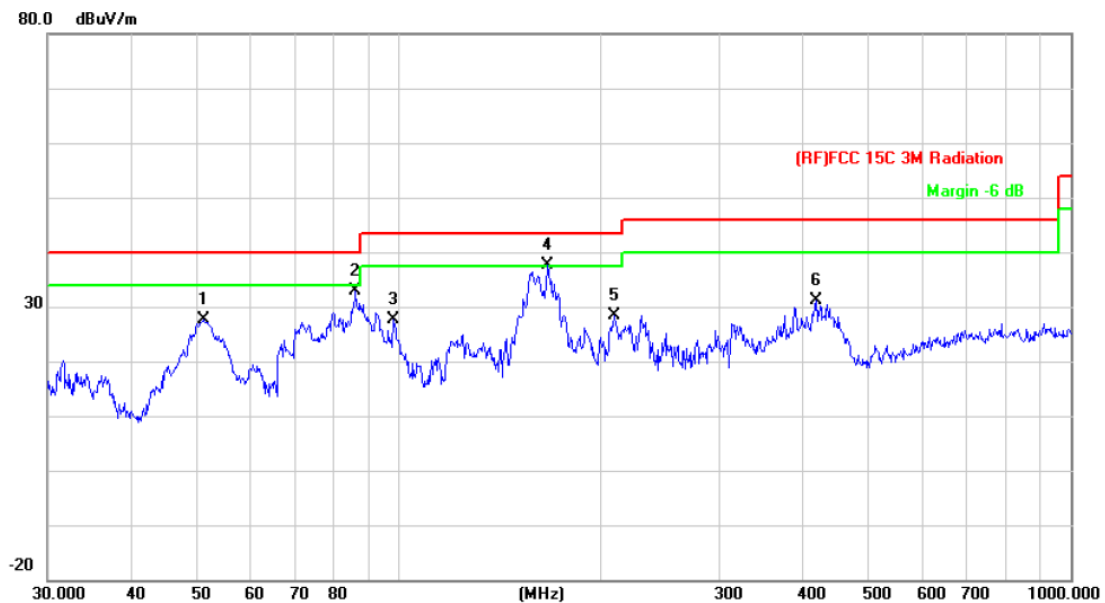
*:Maximum data x:Over limit !:over margin

Emission Level= Read Level+ Correct Factor





EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2462MHz		
Remark:	Only worse case is reported		

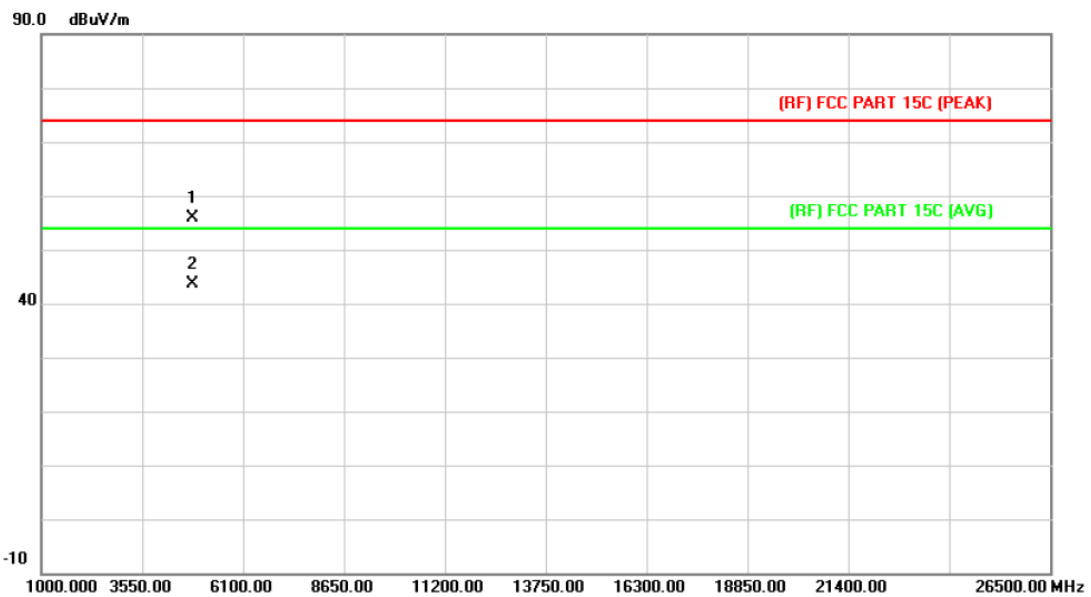


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		51.3004	52.07	-24.51	27.56	40.00	-12.44	peak
2		86.2001	55.82	-22.97	32.85	40.00	-7.15	peak
3		98.1419	49.65	-22.01	27.64	43.50	-15.86	peak
4	*	166.6511	58.23	-20.70	37.53	43.50	-5.97	peak
5		209.3129	47.96	-19.59	28.37	43.50	-15.13	peak
6		417.6409	43.55	-12.42	31.13	46.00	-14.87	peak

*:Maximum data x:Over limit !:over margin

Emission Level= Read Level+ Correct Factor

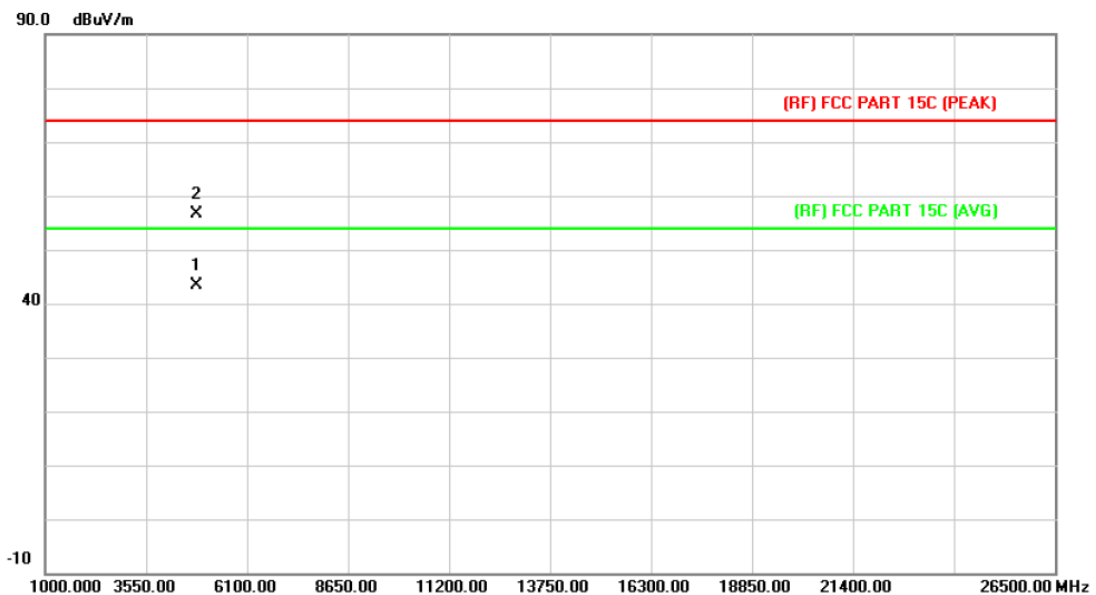
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz ANT 1		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4823.775	42.38	13.56	55.94	74.00	-18.06	peak
2	*	4824.307	30.16	13.56	43.72	54.00	-10.28	AVG

Emission Level= Read Level+ Correct Factor

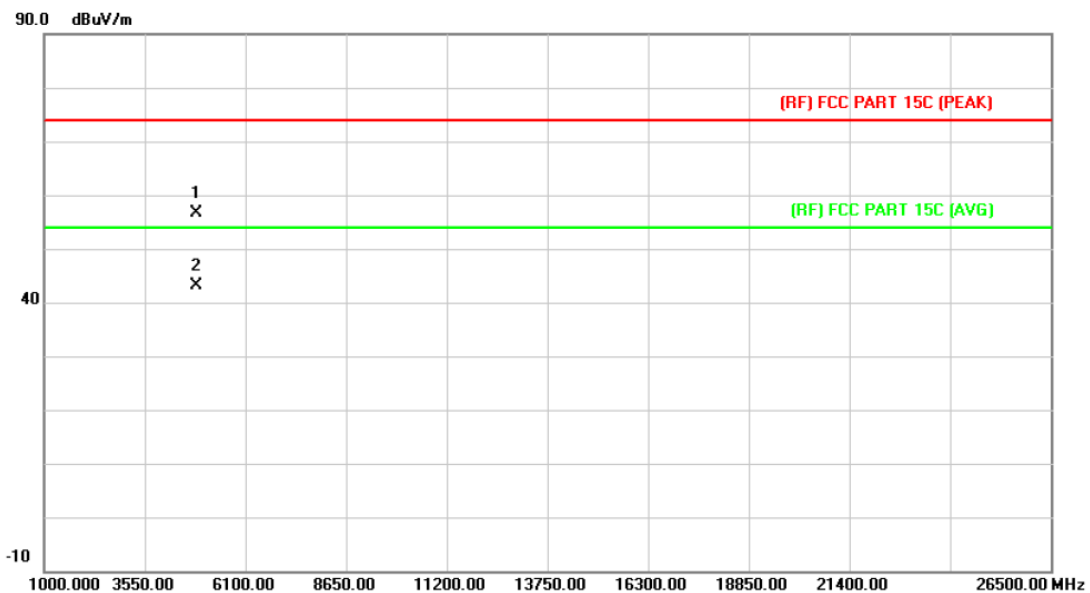
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz ANT 1		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4823.874	29.89	13.56	43.45	54.00	-10.55	AVG
2		4824.410	43.16	13.56	56.72	74.00	-17.28	peak

Emission Level= Read Level+ Correct Factor

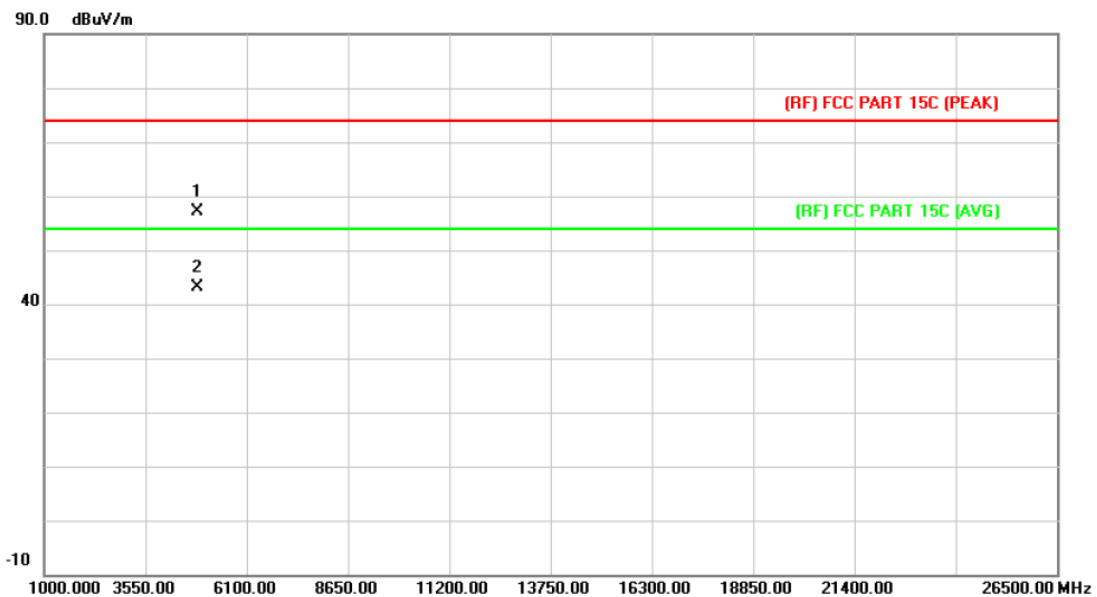
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2437MHz ANT 1		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4873.661	42.87	13.86	56.73	74.00	-17.27	peak
2	*	4873.708	29.37	13.86	43.23	54.00	-10.77	AVG

Emission Level= Read Level+ Correct Factor

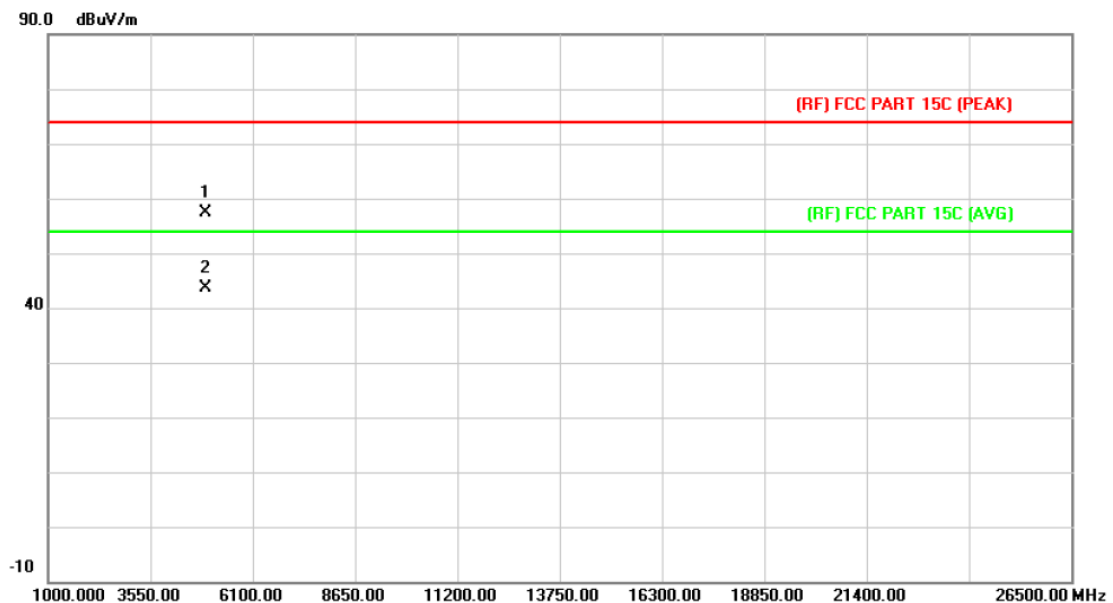
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2437MHz ANT 1		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4873.837	43.28	13.86	57.14	74.00	-16.86	peak
2	*	4874.304	29.31	13.86	43.17	54.00	-10.83	AVG

Emission Level= Read Level+ Correct Factor

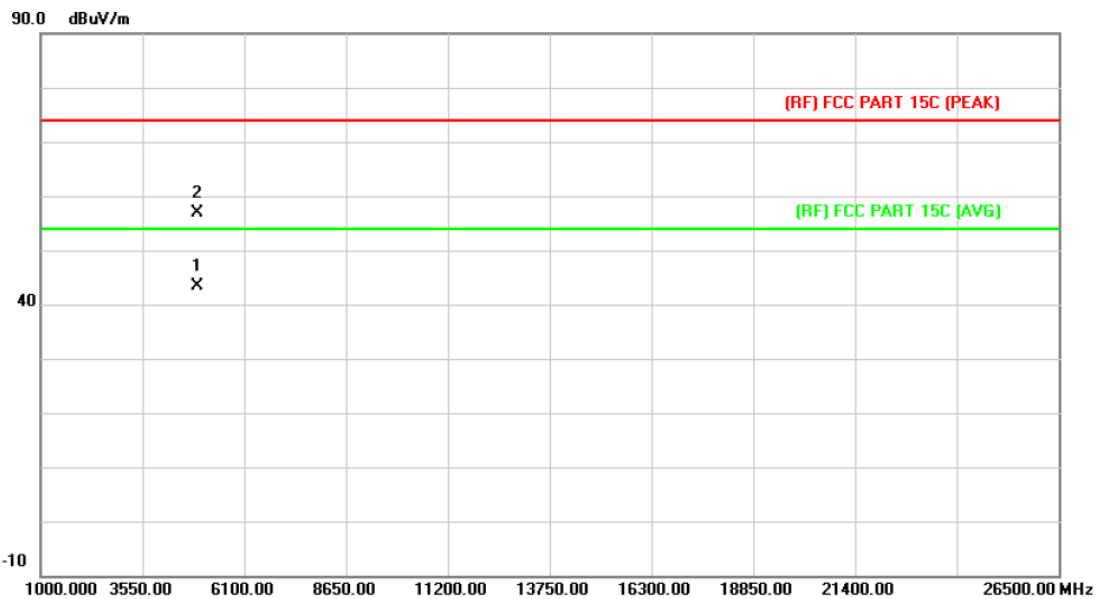
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2462MHz ANT 1		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4923.606	43.21	14.15	57.36	74.00	-16.64	peak
2	*	4924.412	29.59	14.15	43.74	54.00	-10.26	AVG

Emission Level= Read Level+ Correct Factor

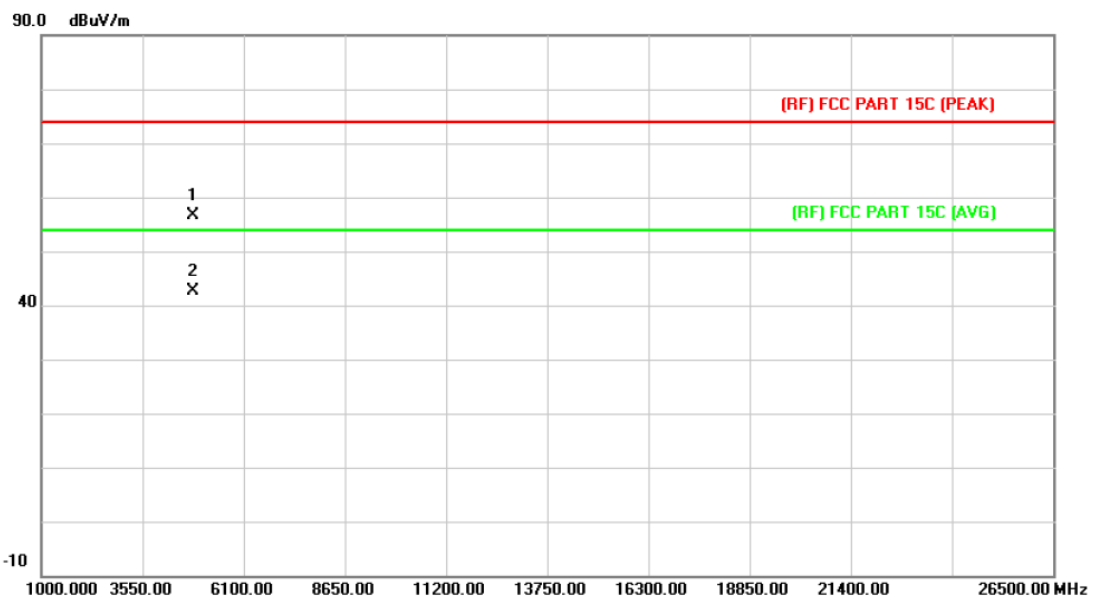
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2462MHz ANT 1		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4923.605	29.32	14.15	43.47	54.00	-10.53	AVG
2		4924.154	42.73	14.15	56.88	74.00	-17.12	peak

Emission Level= Read Level+ Correct Factor

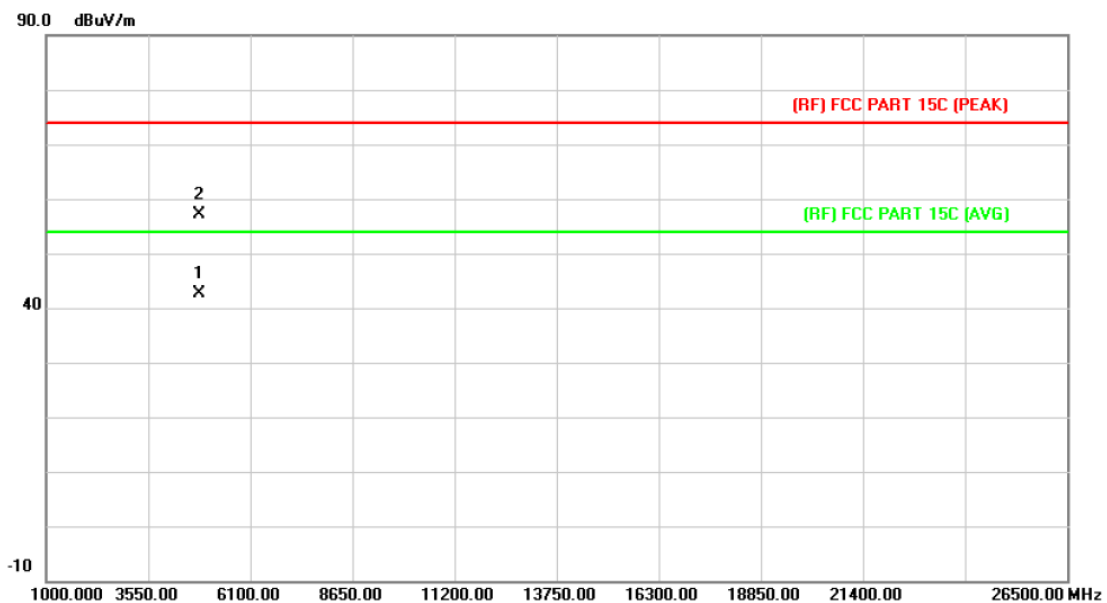
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2412MHz ANT 1		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4823.821	43.00	13.56	56.56	74.00	-17.44	peak
2	*	4823.879	29.19	13.56	42.75	54.00	-11.25	AVG

Emission Level= Read Level+ Correct Factor

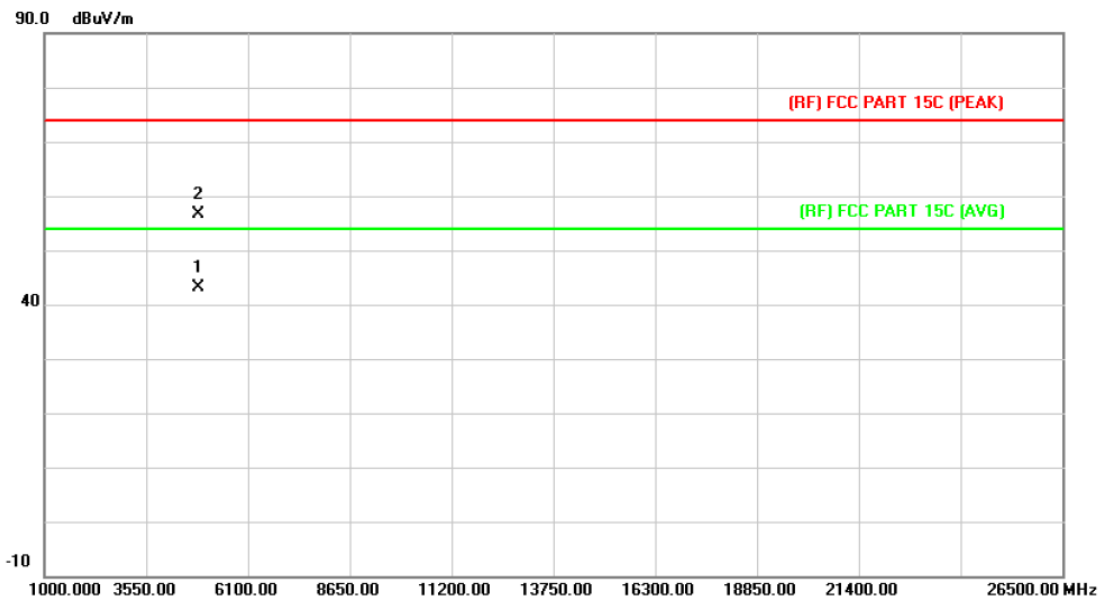
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2412MHz ANT 1		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4823.608	29.13	13.56	42.69	54.00	-11.31	AVG
2		4824.197	43.46	13.56	57.02	74.00	-16.98	peak

Emission Level= Read Level+ Correct Factor

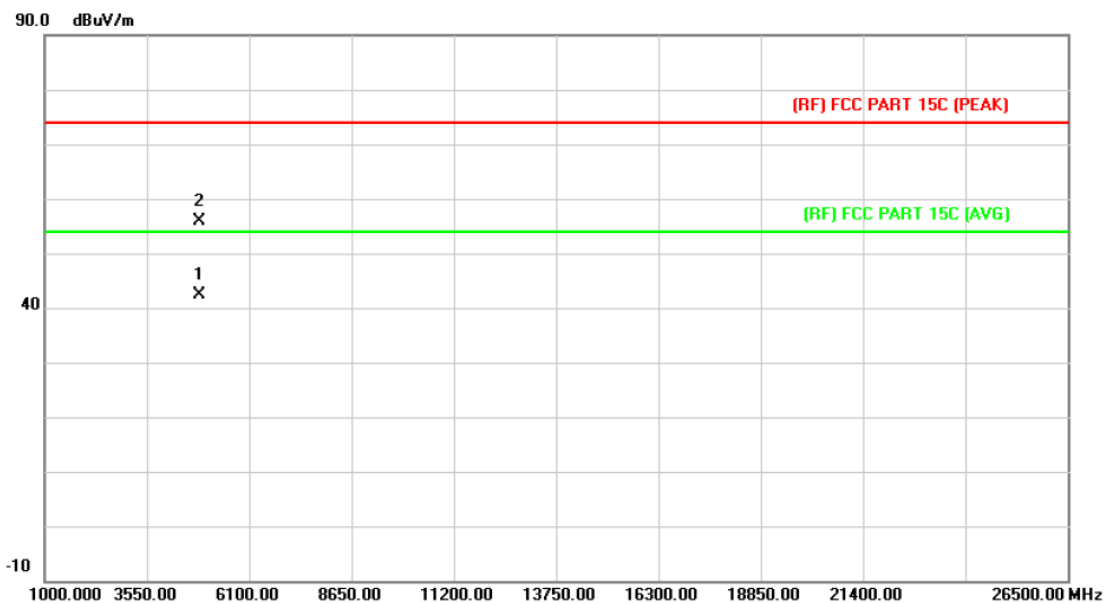
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2437MHz ANT 1		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4873.590	29.34	13.86	43.20	54.00	-10.80	AVG
2		4874.015	42.68	13.86	56.54	74.00	-17.46	peak

Emission Level= Read Level+ Correct Factor

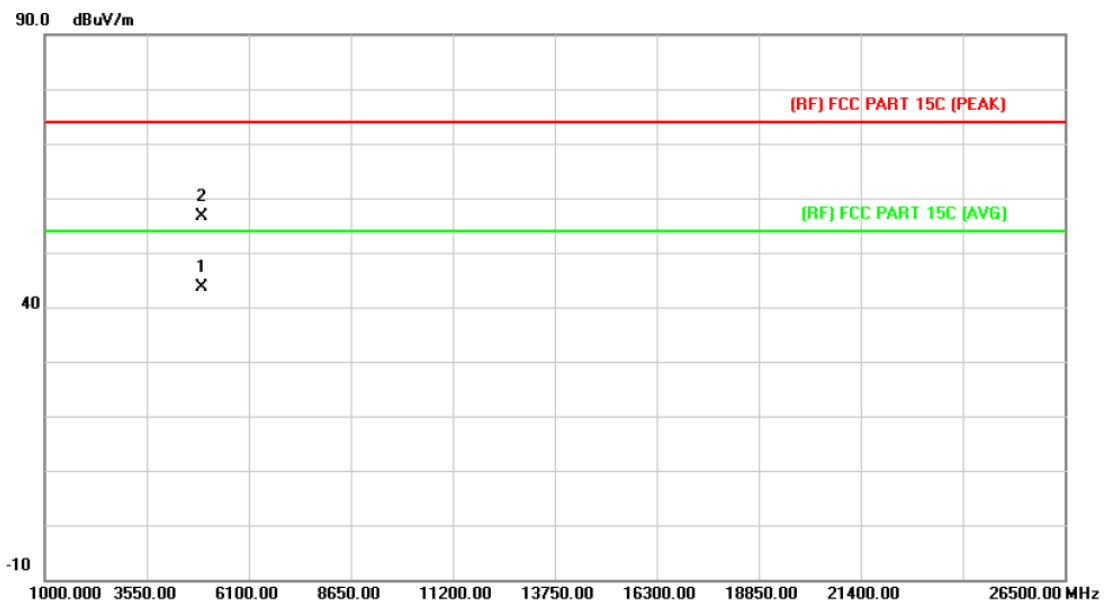
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2437MHz ANT 1		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4874.192	28.40	13.86	42.26	54.00	-11.74	AVG
2		4874.341	41.98	13.86	55.84	74.00	-18.16	peak

Emission Level= Read Level+ Correct Factor

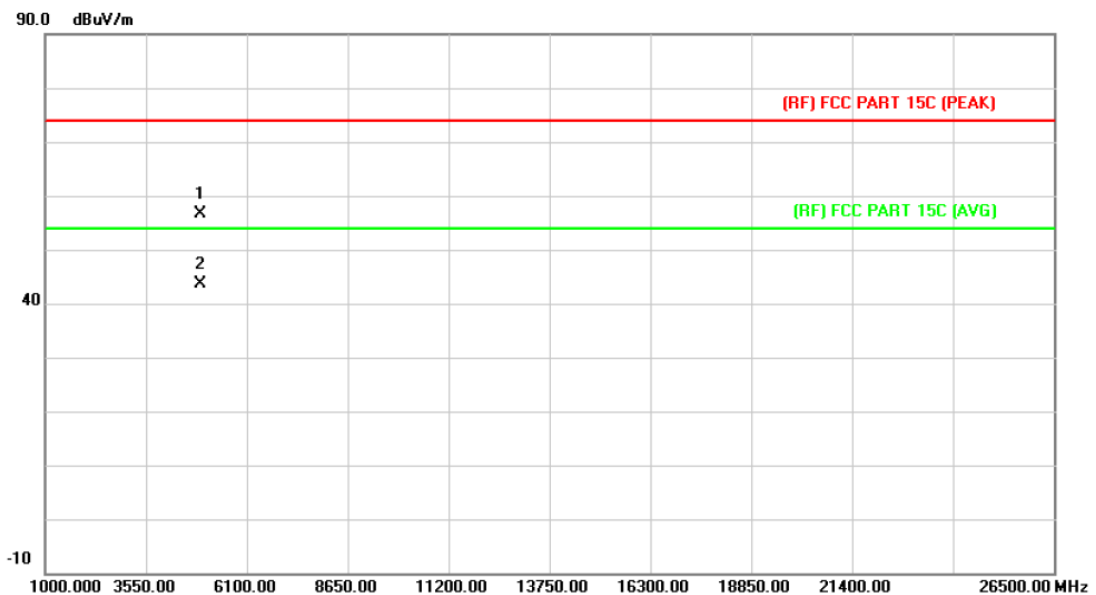
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2462MHz ANT 1		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4923.780	29.60	14.15	43.75	54.00	-10.25	AVG
2		4924.344	42.58	14.15	56.73	74.00	-17.27	peak

Emission Level= Read Level+ Correct Factor

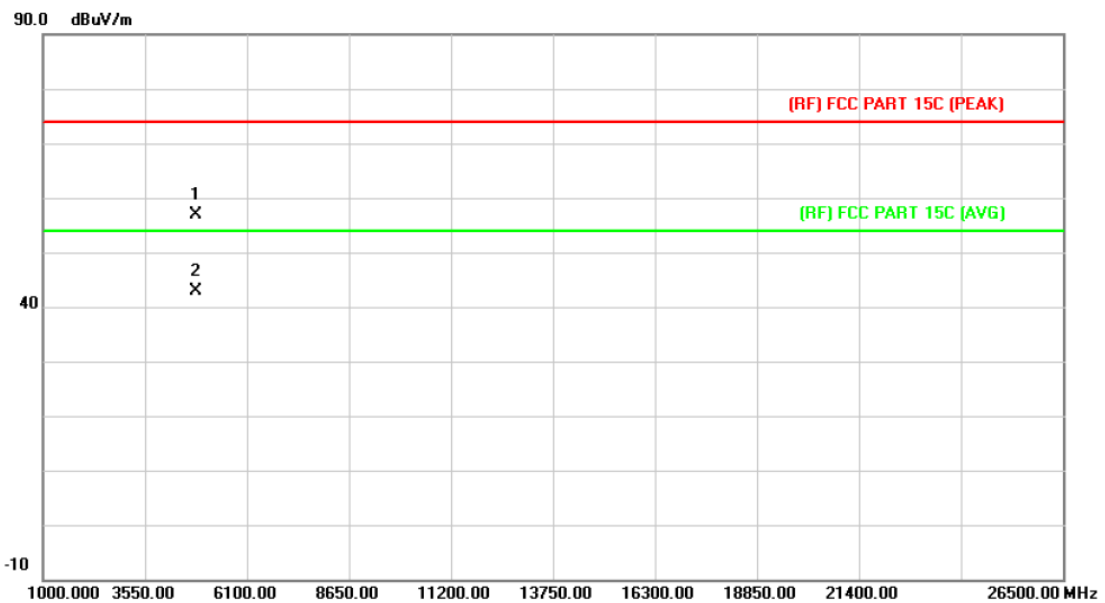
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2462MHz ANT 1		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4924.288	42.56	14.15	56.71	74.00	-17.29	peak
2	*	4924.314	29.37	14.15	43.52	54.00	-10.48	AVG

Emission Level= Read Level+ Correct Factor

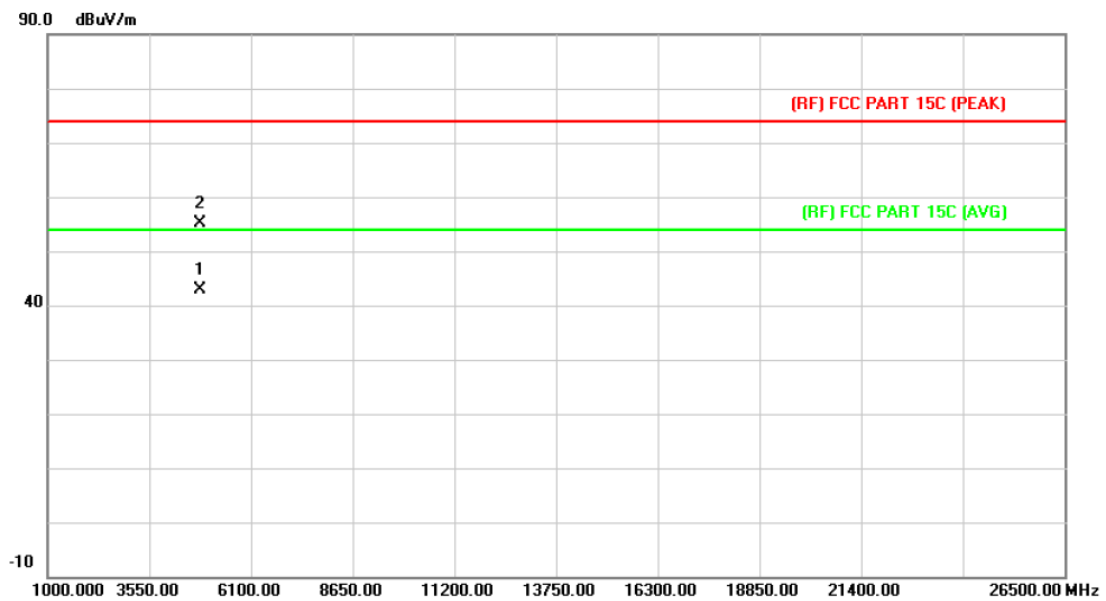
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2412MHz ANT1+2		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4823.939	43.26	13.56	56.82	74.00	-17.18	peak
2	*	4824.132	29.33	13.56	42.89	54.00	-11.11	AVG

Emission Level= Read Level+ Correct Factor

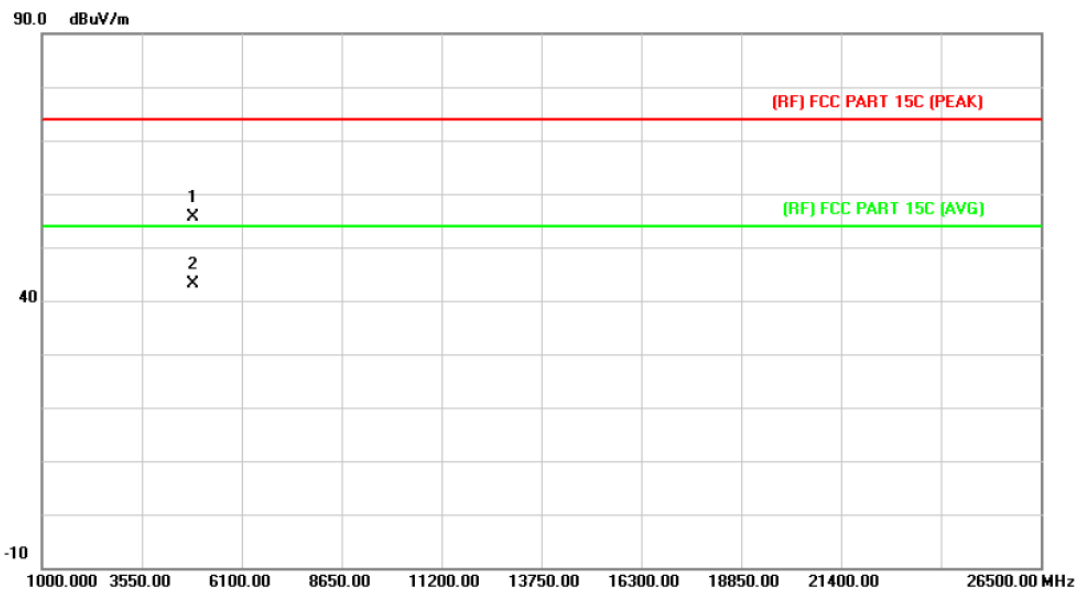
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2412MHz ANT 1+2		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4824.372	29.30	13.56	42.86	54.00	-11.14	AVG
2		4824.399	41.50	13.56	55.06	74.00	-18.94	peak

Emission Level= Read Level+ Correct Factor

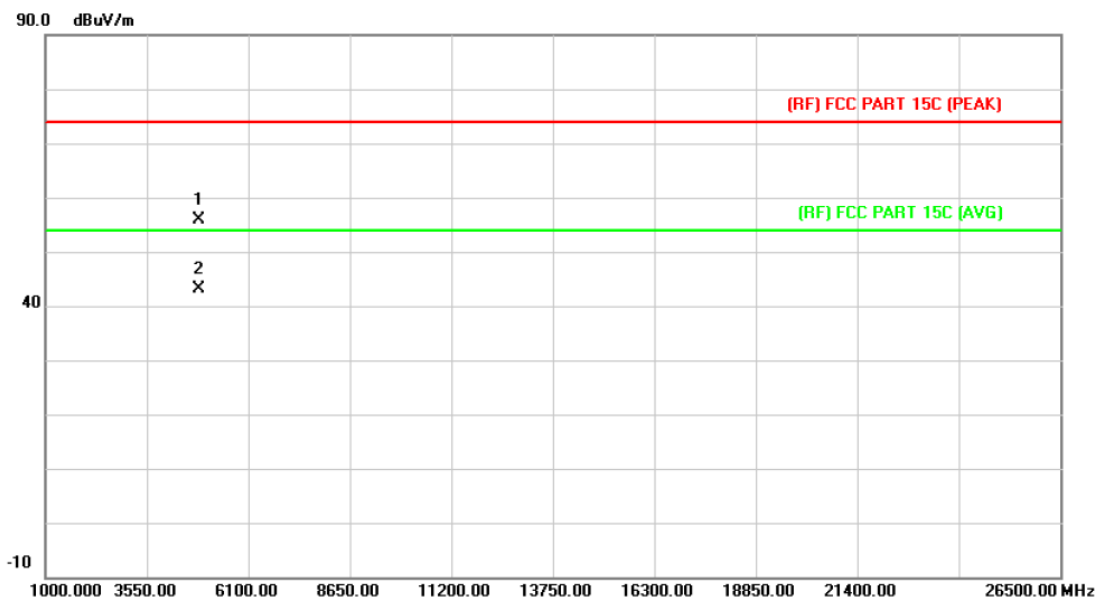
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2437MHz ANT 1+2		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4873.919	41.82	13.86	55.68	74.00	-18.32	peak
2	*	4874.350	29.24	13.86	43.10	54.00	-10.90	AVG

Emission Level= Read Level+ Correct Factor

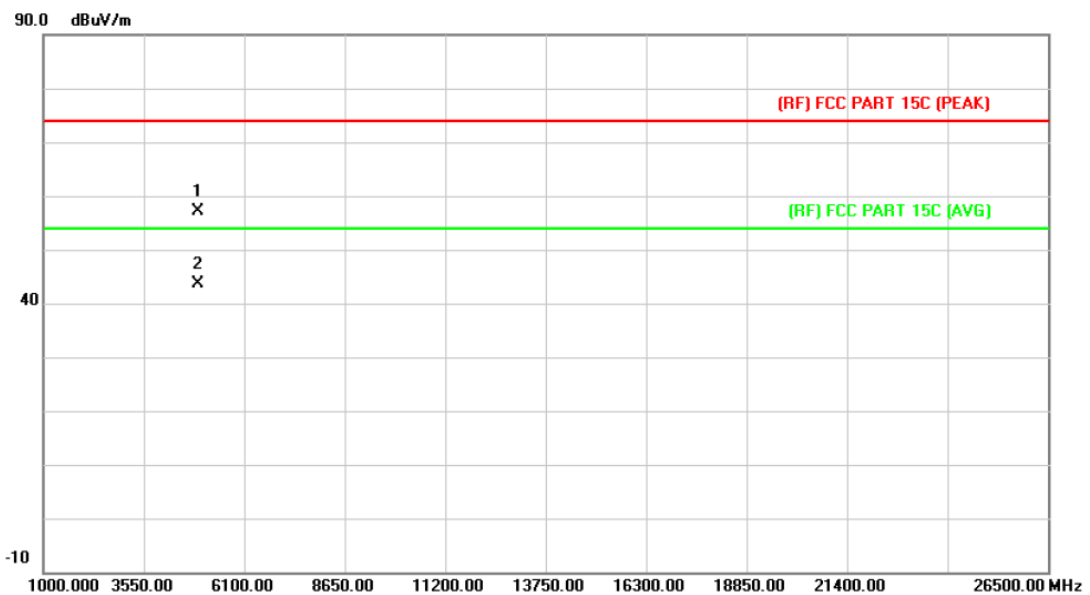
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2437MHz ANT 1+2		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4873.562	41.91	13.86	55.77	74.00	-18.23	peak
2	*	4874.475	29.16	13.86	43.02	54.00	-10.98	AVG

Emission Level= Read Level+ Correct Factor

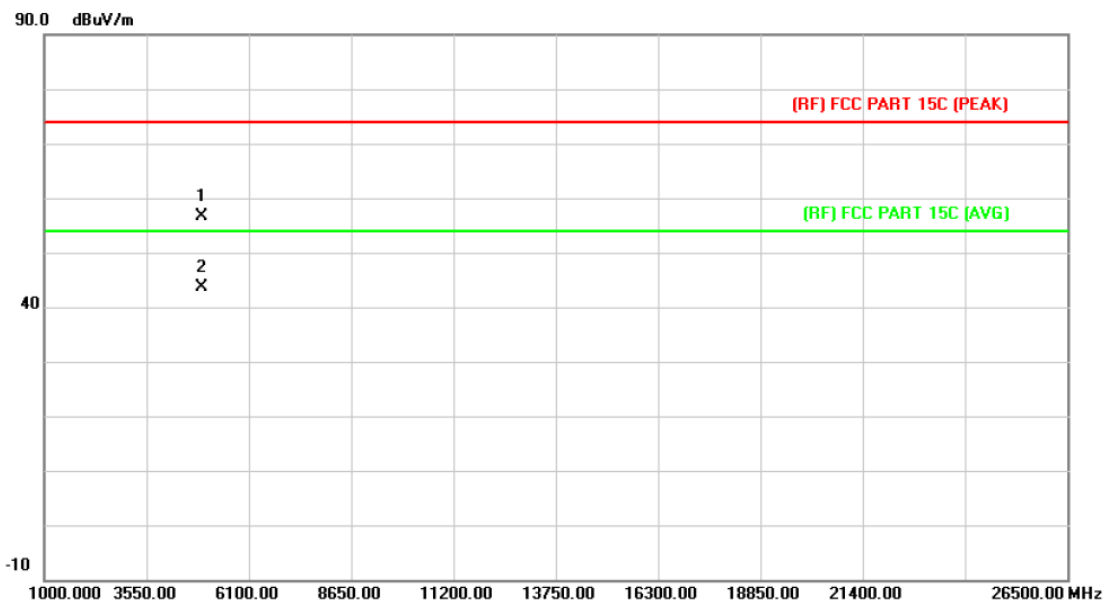
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2462MHz ANT 1+2		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4923.948	42.91	14.15	57.06	74.00	-16.94	peak
2	*	4924.132	29.38	14.15	43.53	54.00	-10.47	AVG

Emission Level= Read Level+ Correct Factor

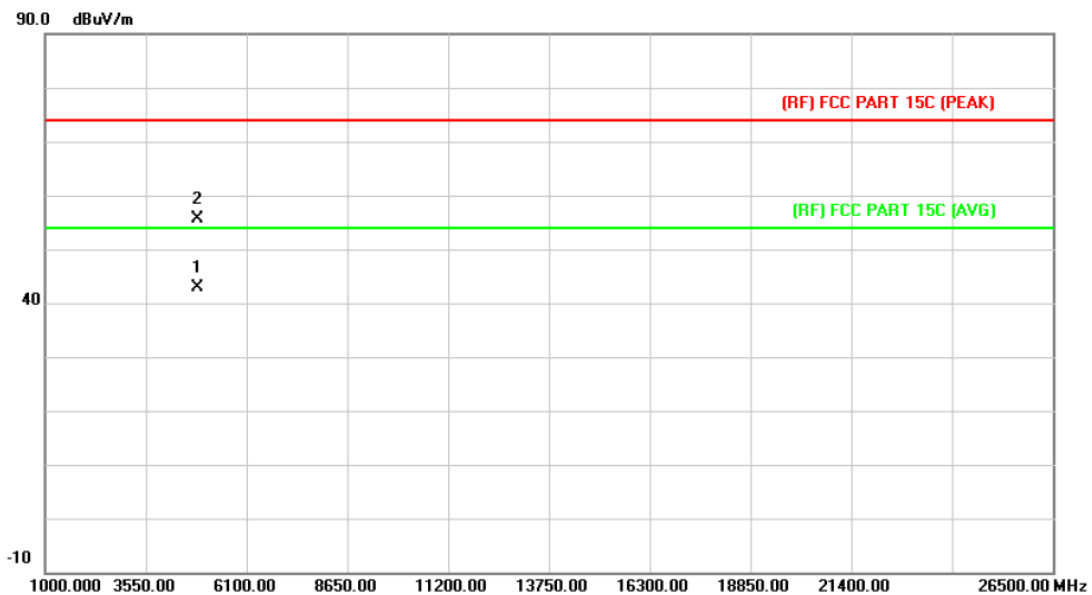
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2462MHz ANT 1+2		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4924.188	42.49	14.15	56.64	74.00	-17.36	peak
2	*	4924.262	29.51	14.15	43.66	54.00	-10.34	AVG

Emission Level= Read Level+ Correct Factor

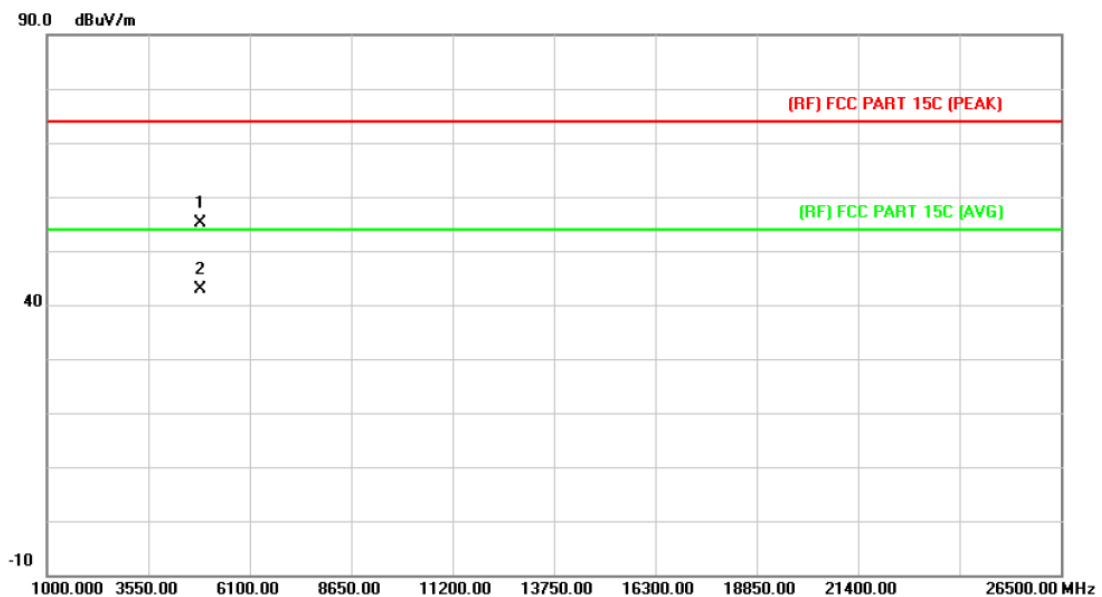
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2422MHz ANT 1+2		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4843.528	29.21	13.68	42.89	54.00	-11.11	AVG
2		4844.496	42.05	13.68	55.73	74.00	-18.27	peak

Emission Level= Read Level+ Correct Factor

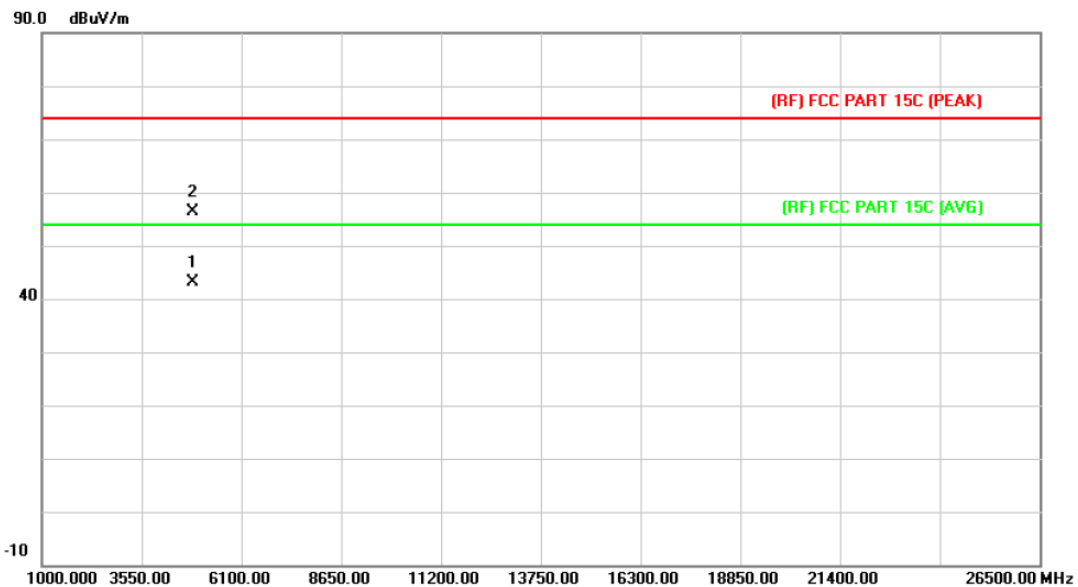
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2422MHz ANT 1+2		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4844.065	41.42	13.68	55.10	74.00	-18.90	peak
2	*	4844.330	29.18	13.68	42.86	54.00	-11.14	AVG

Emission Level= Read Level+ Correct Factor

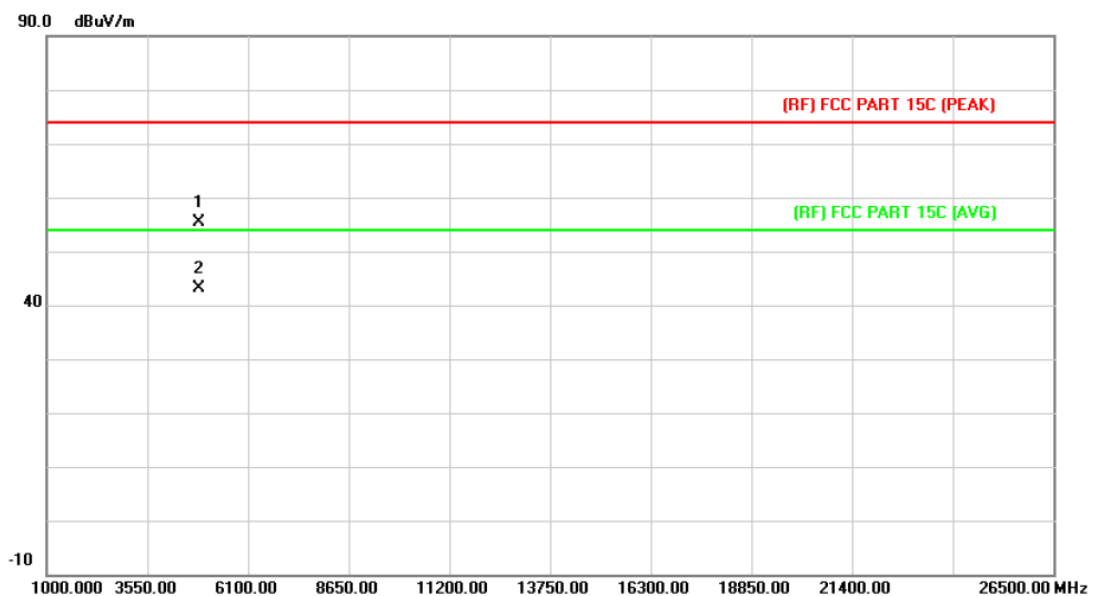
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2437MHz ANT 1+2		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4873.703	29.35	13.86	43.21	54.00	-10.79	AVG
2		4874.190	42.46	13.86	56.32	74.00	-17.68	peak

Emission Level= Read Level+ Correct Factor

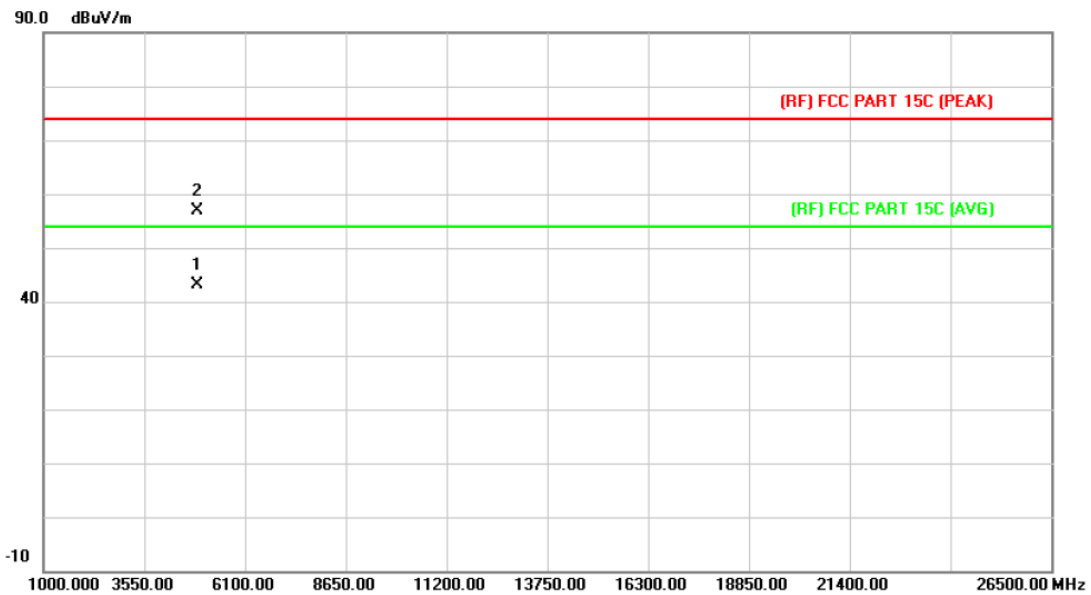
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2437MHz ANT 1+2		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4873.838	41.64	13.86	55.50	74.00	-18.50	peak
2	*	4874.458	29.25	13.86	43.11	54.00	-10.89	AVG

Emission Level= Read Level+ Correct Factor

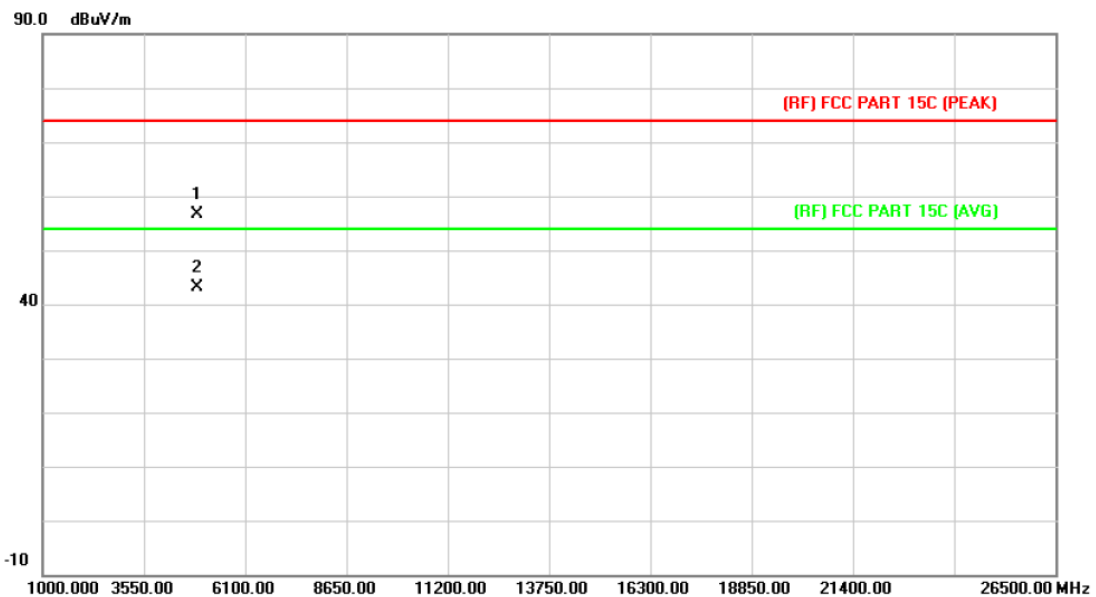
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2452MHz ANT 1+2		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4903.746	29.18	14.03	43.21	54.00	-10.79	AVG
2		4904.458	42.76	14.03	56.79	74.00	-17.21	peak

Emission Level= Read Level+ Correct Factor

EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2452MHz ANT 1+2		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4903.942	42.56	14.03	56.59	74.00	-17.41	peak
2	*	4904.259	29.08	14.03	43.11	54.00	-10.89	AVG

Emission Level= Read Level+ Correct Factor

6. Restricted Bands Requirement

6.1 Test Standard and Limit

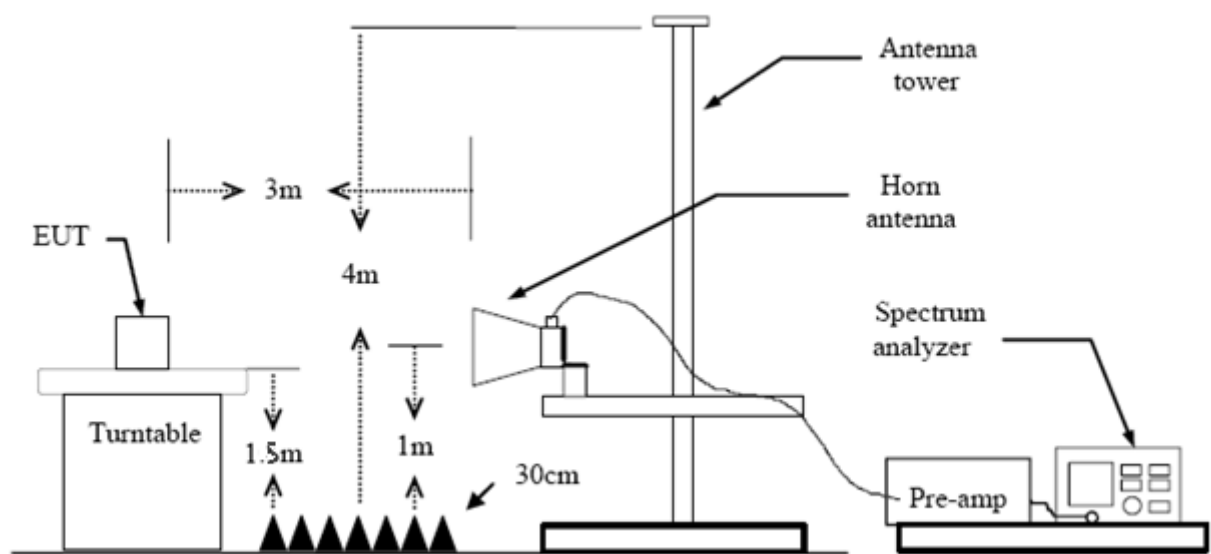
6.1.1 Test Standard

FCC Part 15.209 FCC Part 15.205

6.1.2 Test Limit

Restricted Frequency Band (MHz)	Class B (dBuV/m)(at 3 M)	
	Peak	Average
2310 ~2390	74	54
2483.5 ~2500	74	54

6.2 Test Setup



6.3 Test Procedure

- (1) The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1 GHz. The EUT was placed on a rotating 0.8m high above ground, the table was rotated 360 degrees to determine the position of the highest radiation.
- (2) Measurements at frequency above 1GHz. The EUT was placed on a rotating 1.5m high above the ground. RF absorbers covered the ground plane with a minimum area of 3.0m by 3.0m between the EUT and measurement receiver antenna. The RF absorber shall not exceed 30cm in high above the conducting floor. The table was rotated 360 degrees to determine the position of the highest radiation.
- (3) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set to make measurement.

- (4) 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.
- (5) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit Bellow 1 GHz, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. But the Peak Value and average value both need to comply with applicable limit above 1 GHz.
- (6) Testing frequency range below 1GHz the measuring instrument use VBW=120 kHz with Quasi-peak detection.
- (7) Testing frequency range above 1GHz the measuring instrument use RBW=1 MHz and VBW=3 MHz with Peak Detector for Peak Values, and use RBW=1 MHz and VBW=10 Hz with Peak Detector for Average Values.
- (8) For the actual test configuration, please see the test setup photo.

6.4 EUT Operating Condition

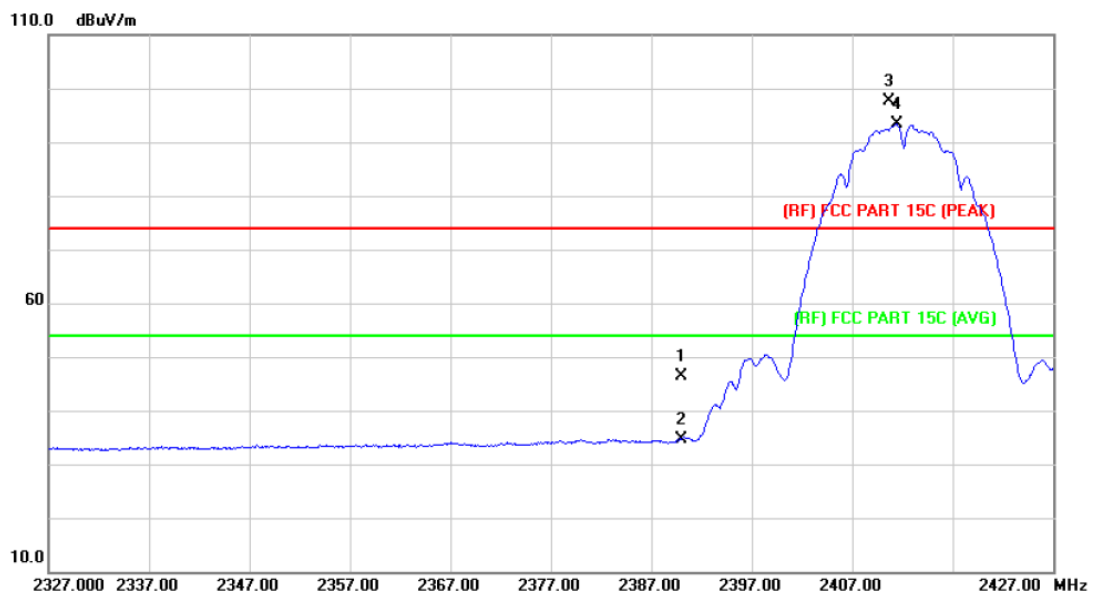
The Equipment Under Test was set to Continual Transmitting in maximum power.

6.5 Test Data

Please see the next page.

(1) Radiation Test

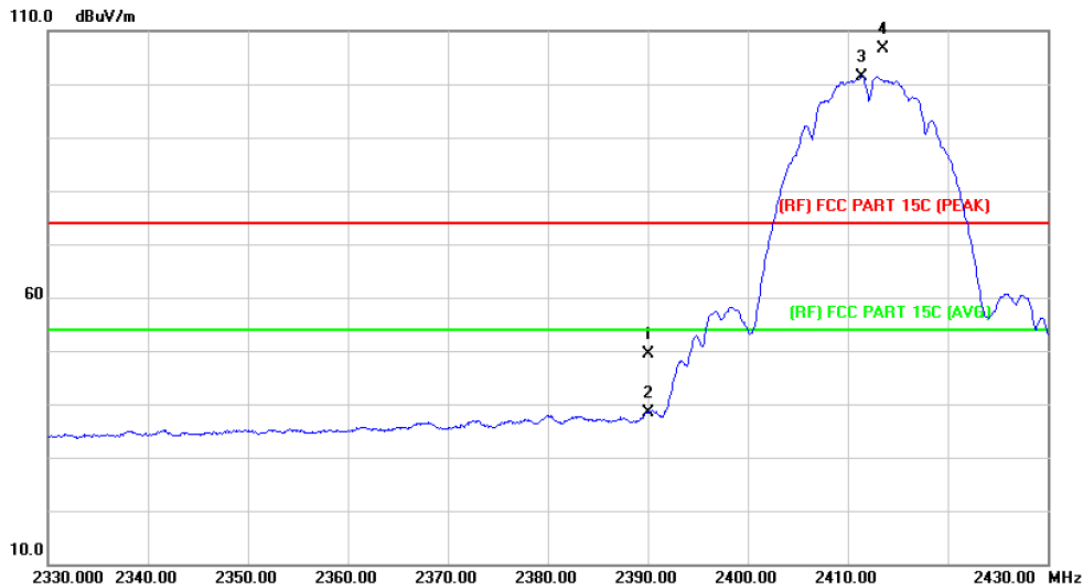
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz ANT1		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	45.72	0.77	46.49	74.00	-27.51	peak
2		2390.000	33.98	0.77	34.75	54.00	-19.25	AVG
3	X	2410.700	96.78	0.86	97.64	Fundamental Frequency		peak
4	*	2411.400	92.51	0.86	93.37	Fundamental Frequency		AVG

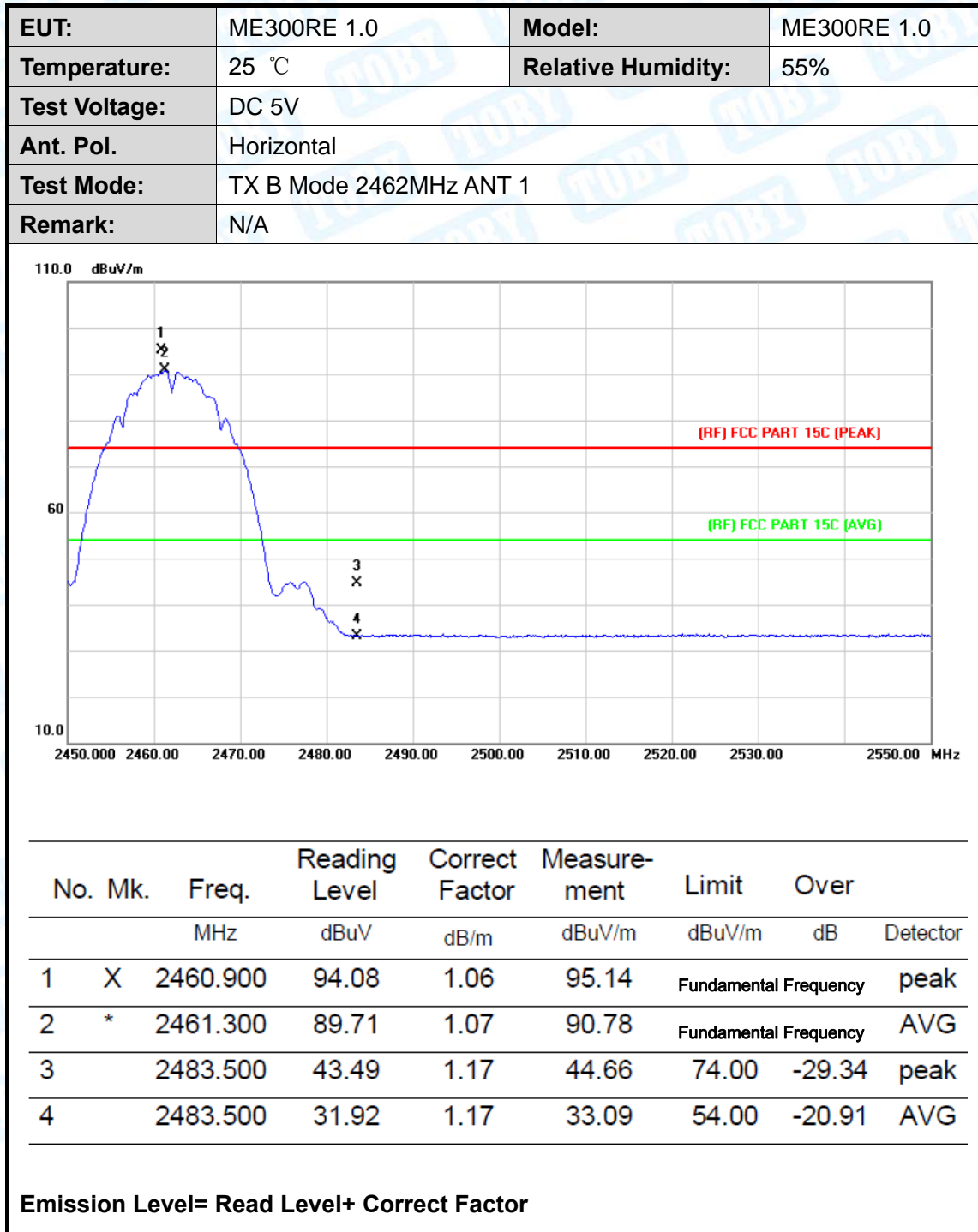
Emission Level= Read Level+ Correct Factor

EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz ANT 1		
Remark:	N/A		

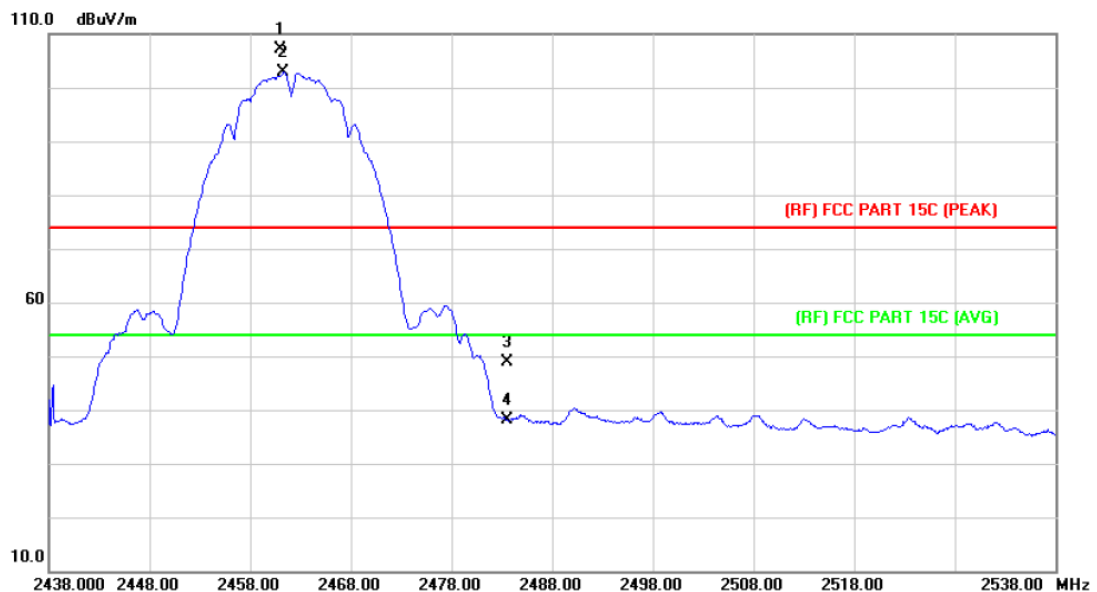


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	48.64	0.77	49.41	74.00	-24.59	peak
2		2390.000	37.72	0.77	38.49	54.00	-15.51	AVG
3	*	2411.400	100.62	0.86	101.48	Fundamental Frequency		AVG
4	X	2413.500	105.87	0.86	106.73	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor



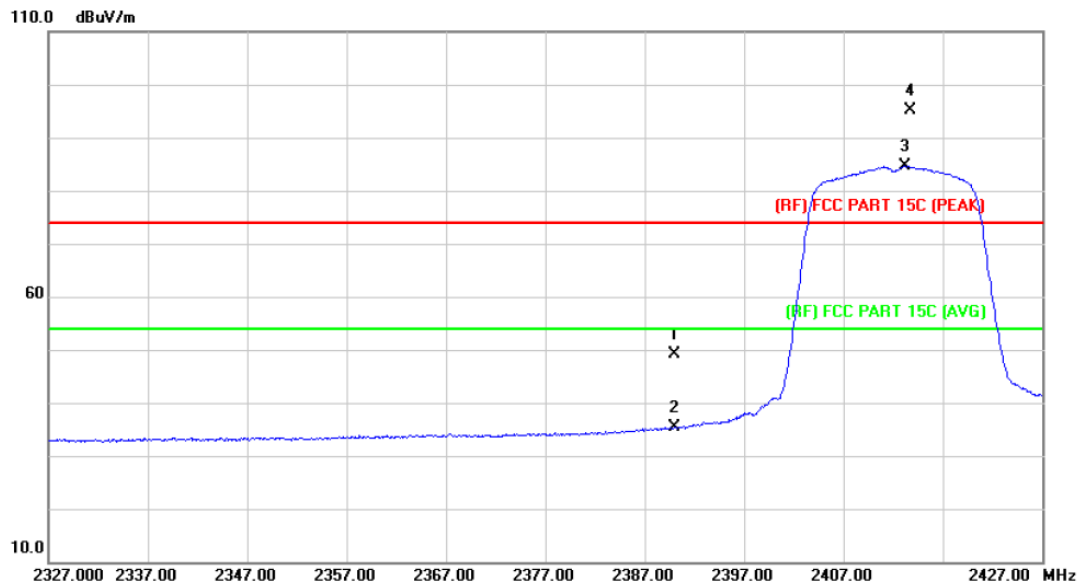
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2462MHz ANT 1		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	X	2461.000	106.09	1.06	107.15	Fundamental Frequency		peak
2	*	2461.300	101.78	1.07	102.85	Fundamental Frequency		AVG
3		2483.500	47.67	1.17	48.84	74.00	-25.16	peak
4		2483.500	37.03	1.17	38.20	54.00	-15.80	AVG

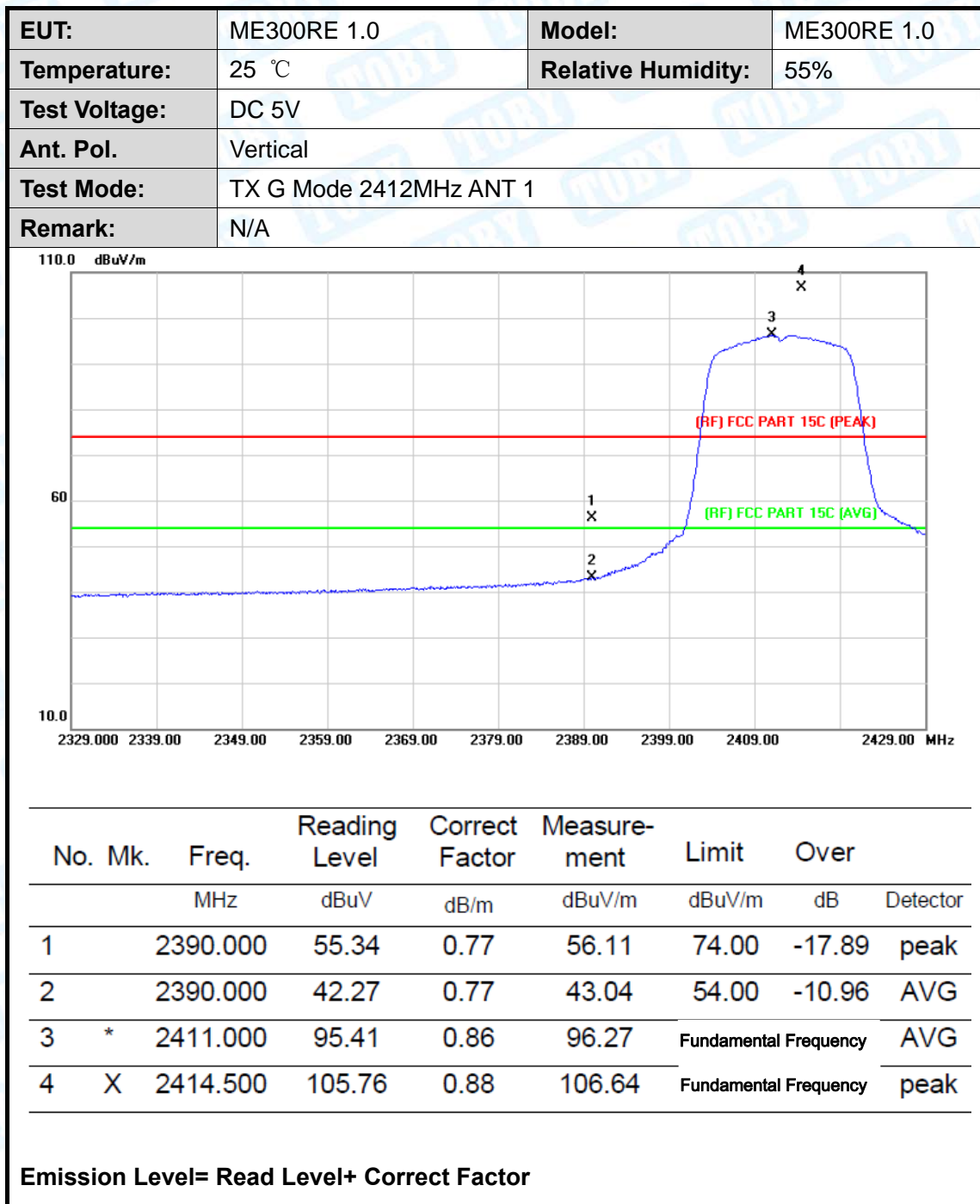
Emission Level= Read Level+ Correct Factor

EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2412MHz ANT 1		
Remark:	N/A		

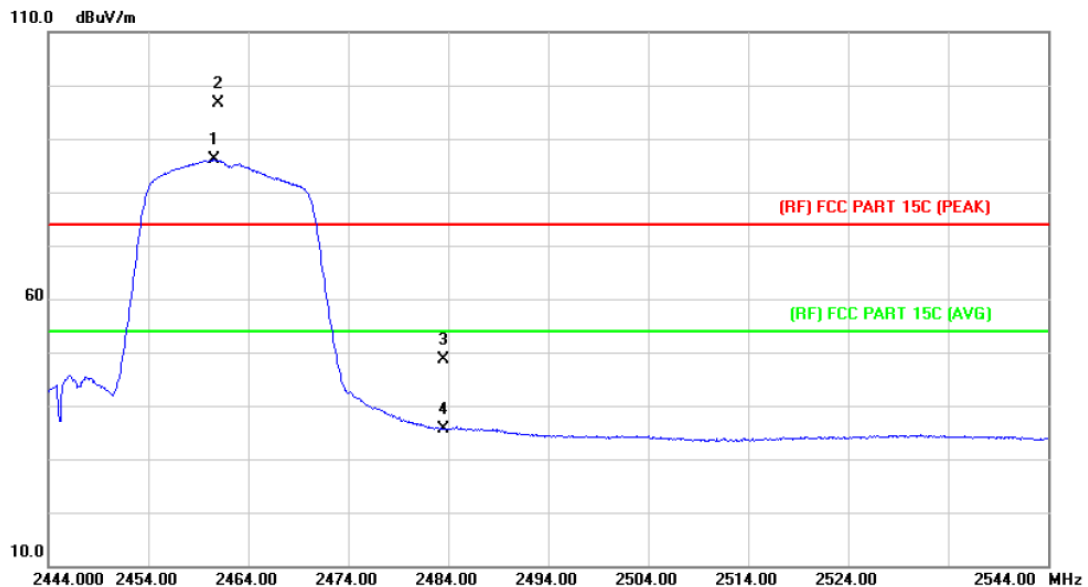


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	48.37	0.77	49.14	74.00	-24.86	peak
2		2390.000	34.69	0.77	35.46	54.00	-18.54	AVG
3	*	2413.200	83.81	0.86	84.67	Fundamental Frequency		AVG
4	X	2413.700	94.38	0.86	95.24	Fundamental Frequency		peak

Emission Level= Read Level+ Correct Factor



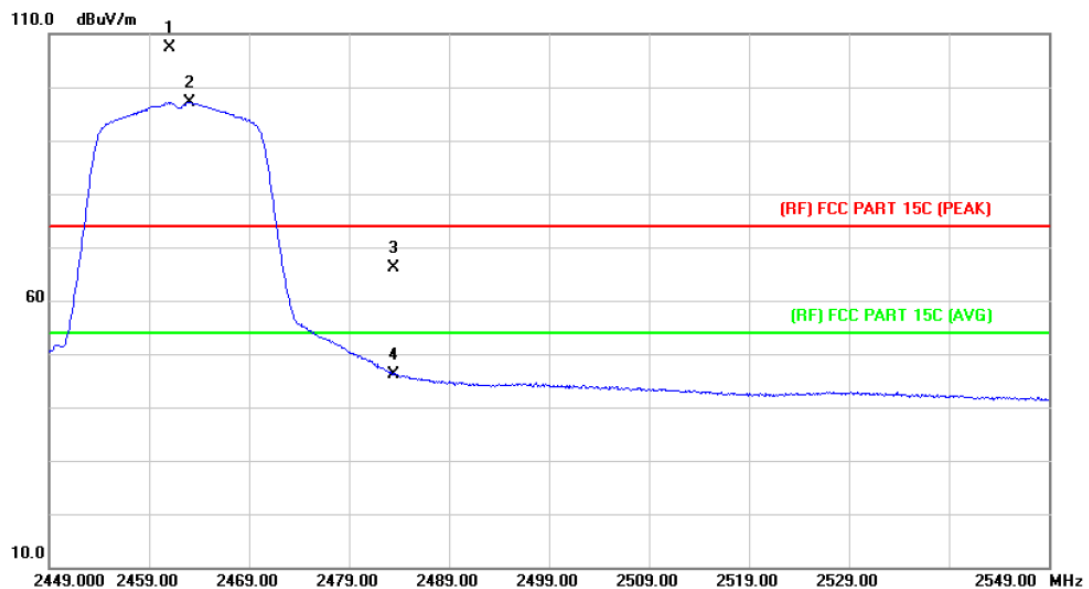
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2462MHz ANT 1		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	2460.600	85.04	1.06	86.10	Fundamental Frequency		AVG
2	X	2461.000	95.65	1.06	96.71	Fundamental Frequency		peak
3		2483.500	47.49	1.17	48.66	74.00	-25.34	peak
4		2483.500	34.42	1.17	35.59	54.00	-18.41	AVG

Emission Level= Read Level+ Correct Factor

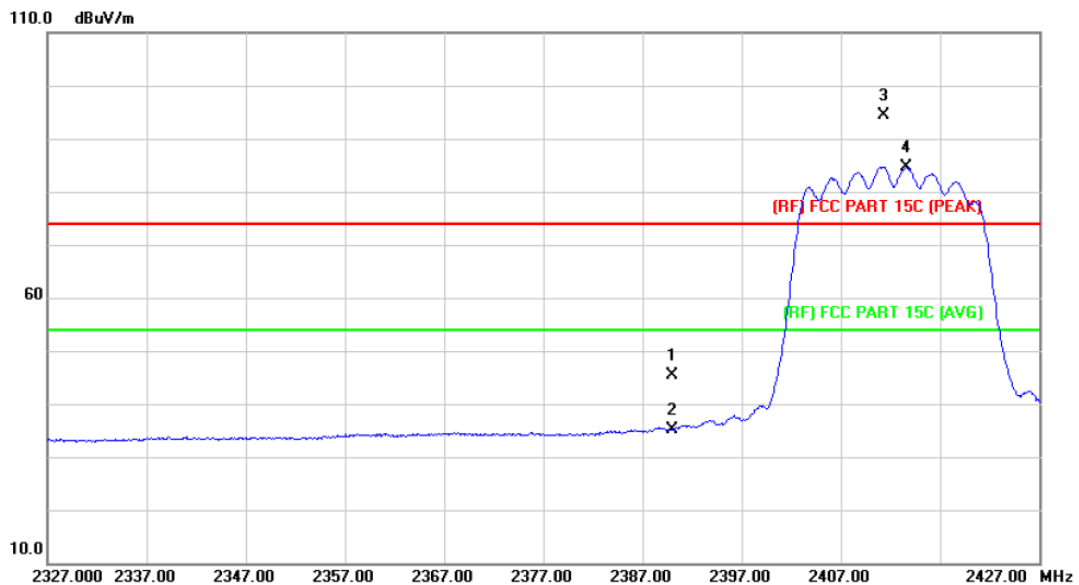
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2462MHz ANT 1		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2461.000	106.27	1.06	107.33	Fundamental Frequency		peak
2	*	2463.100	96.09	1.08	97.17	Fundamental Frequency		AVG
3		2483.500	65.04	1.17	66.21	74.00	-7.79	peak
4		2483.500	44.84	1.17	46.01	54.00	-7.99	AVG

Emission Level= Read Level+ Correct Factor

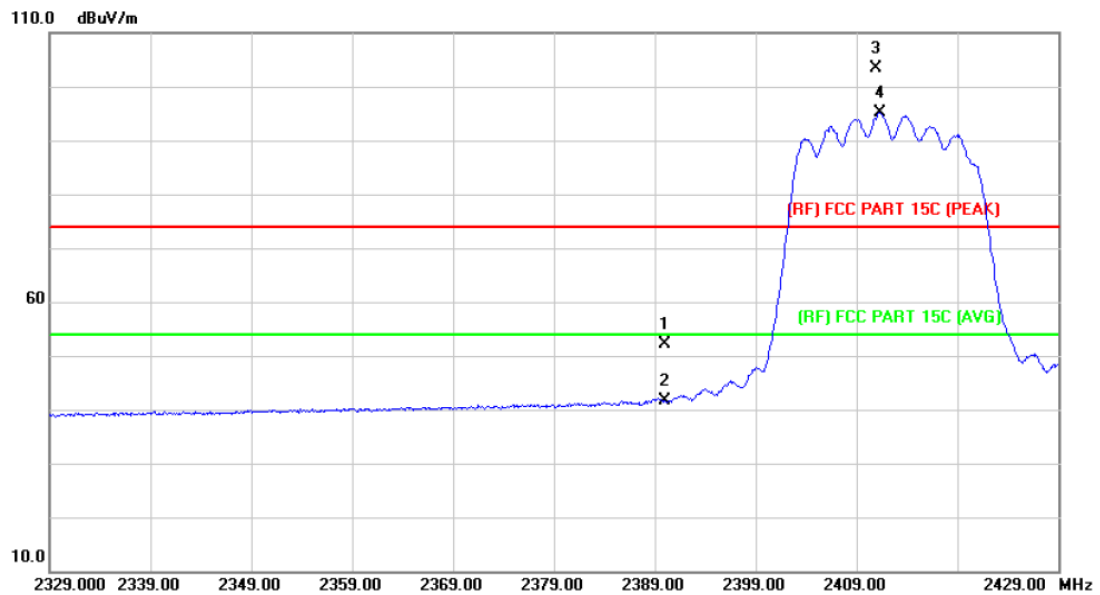
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2412MHz ANT 1+2		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	44.70	0.77	45.47	74.00	-28.53	peak
2		2390.000	34.35	0.77	35.12	54.00	-18.88	AVG
3	X	2411.300	93.54	0.86	94.40	Fundamental Frequency		peak
4	*	2413.600	83.85	0.86	84.71	Fundamental Frequency		AVG

Emission Level= Read Level+ Correct Factor

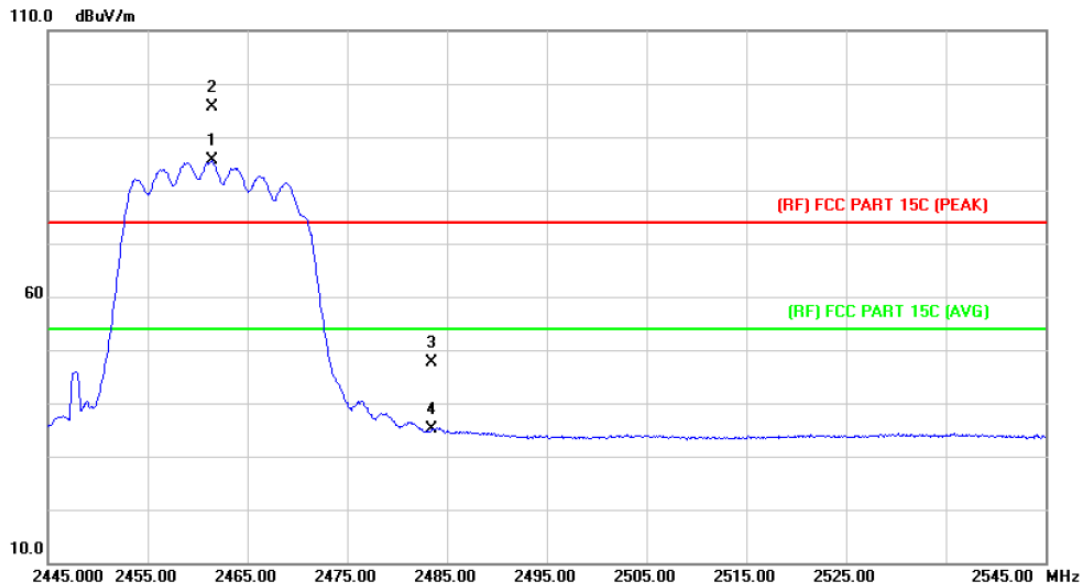
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2412MHz ANT 1+2		
Remark:	N/A		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		2390.000	51.28	0.77	52.05	74.00	-21.95	peak
2		2390.000	40.75	0.77	41.52	54.00	-12.48	AVG
3	X	2410.900	102.58	0.86	103.44	Fundamental Frequency		peak
4	*	2411.300	94.34	0.86	95.20	Fundamental Frequency		AVG

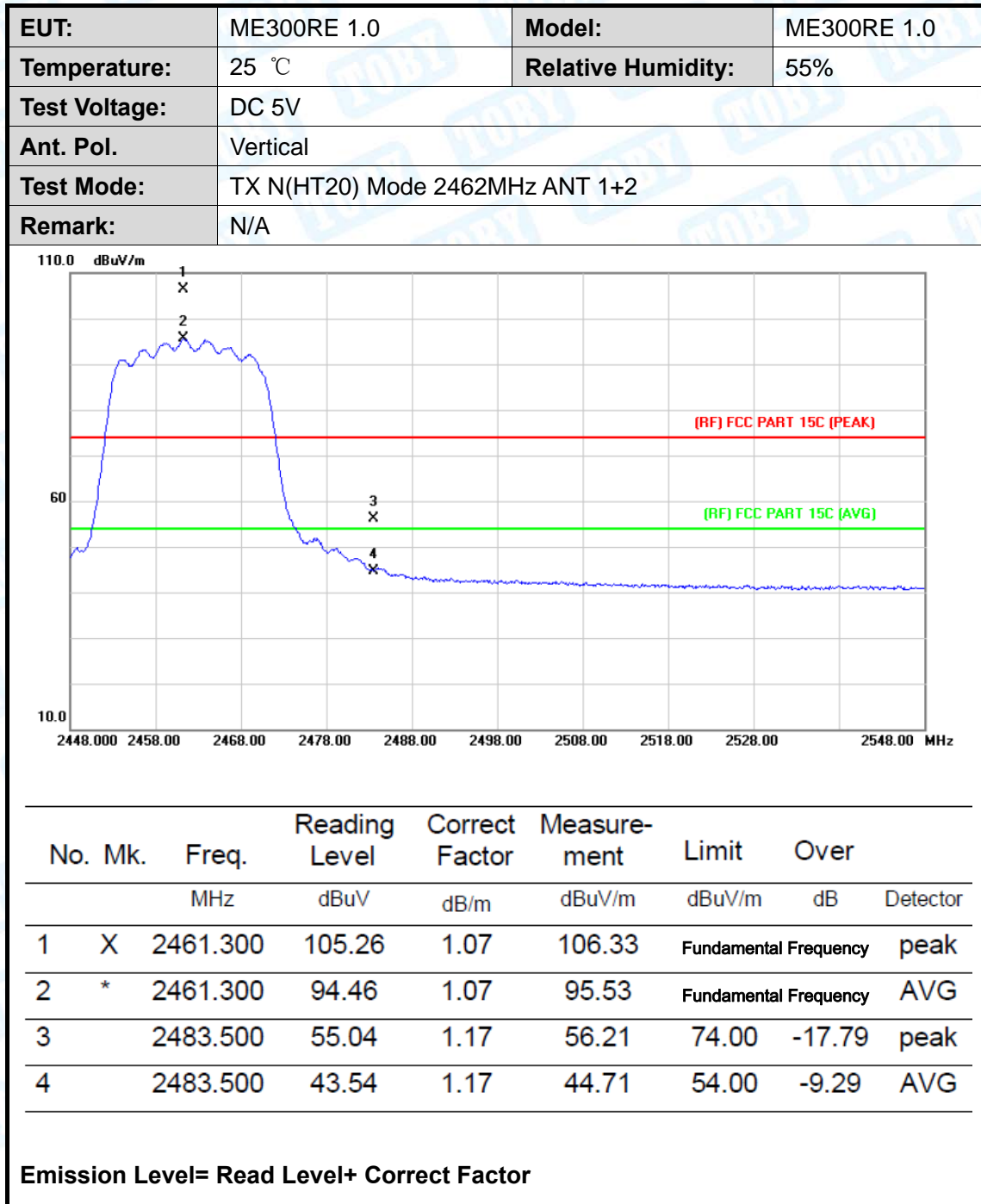
Emission Level= Read Level+ Correct Factor

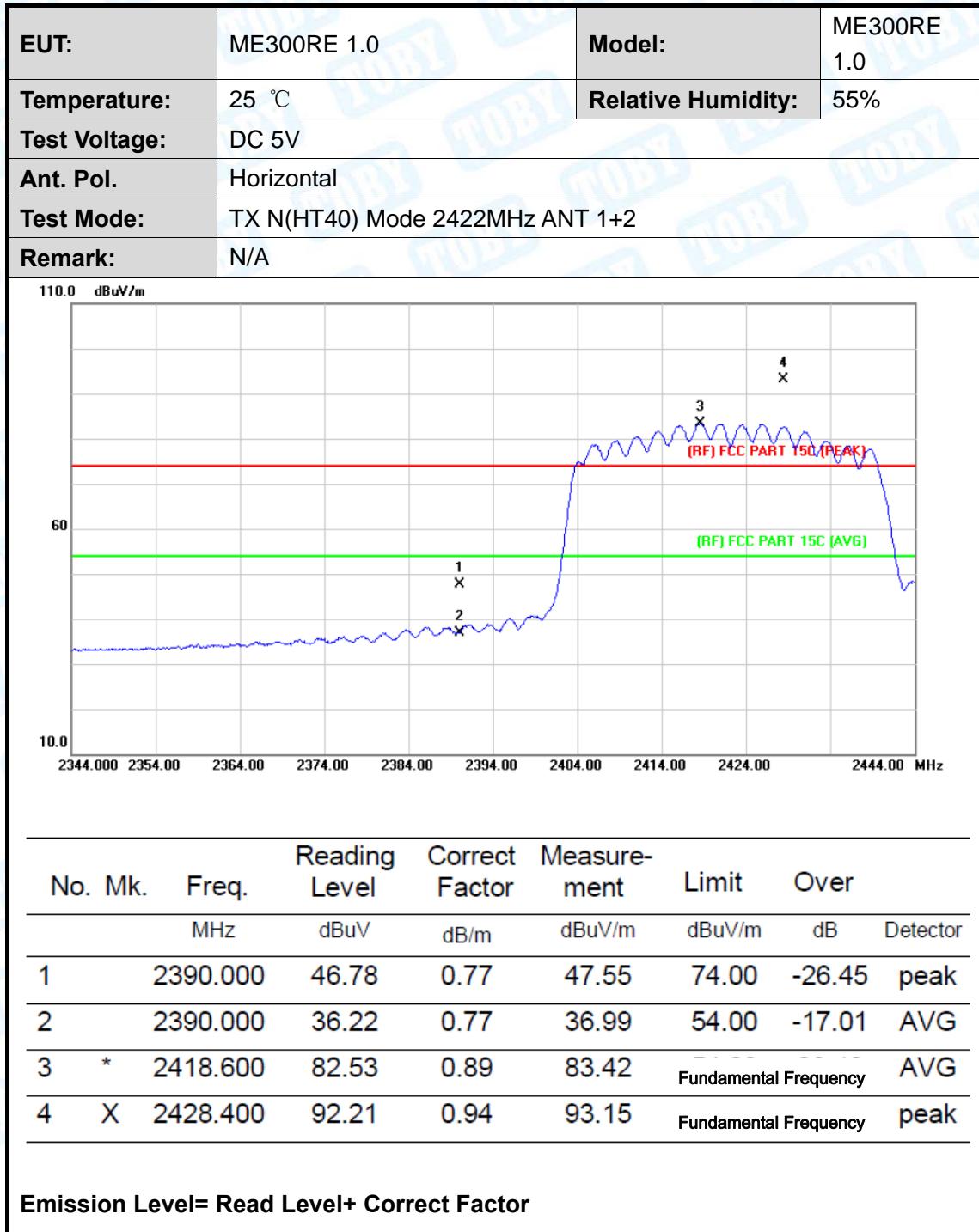
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2462MHz ANT 1+2		
Remark:	N/A		



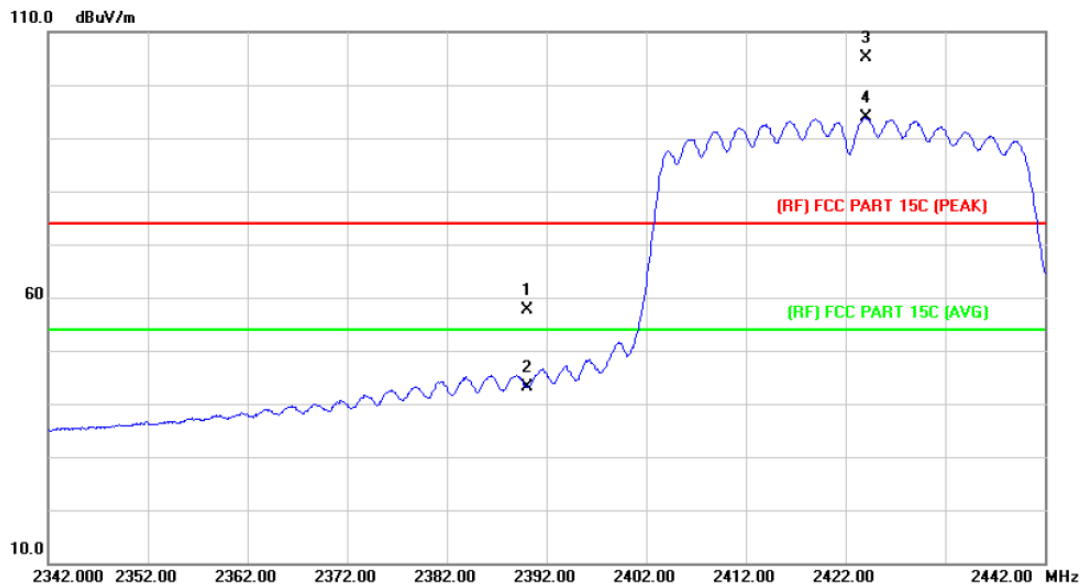
No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	2461.400	84.52	1.07	85.59	Fundamental Frequency		AVG
2	X	2461.500	94.47	1.07	95.54	Fundamental Frequency		peak
3		2483.500	46.39	1.17	47.56	74.00	-26.44	peak
4		2483.500	34.04	1.17	35.21	54.00	-18.79	AVG

Emission Level= Read Level+ Correct Factor



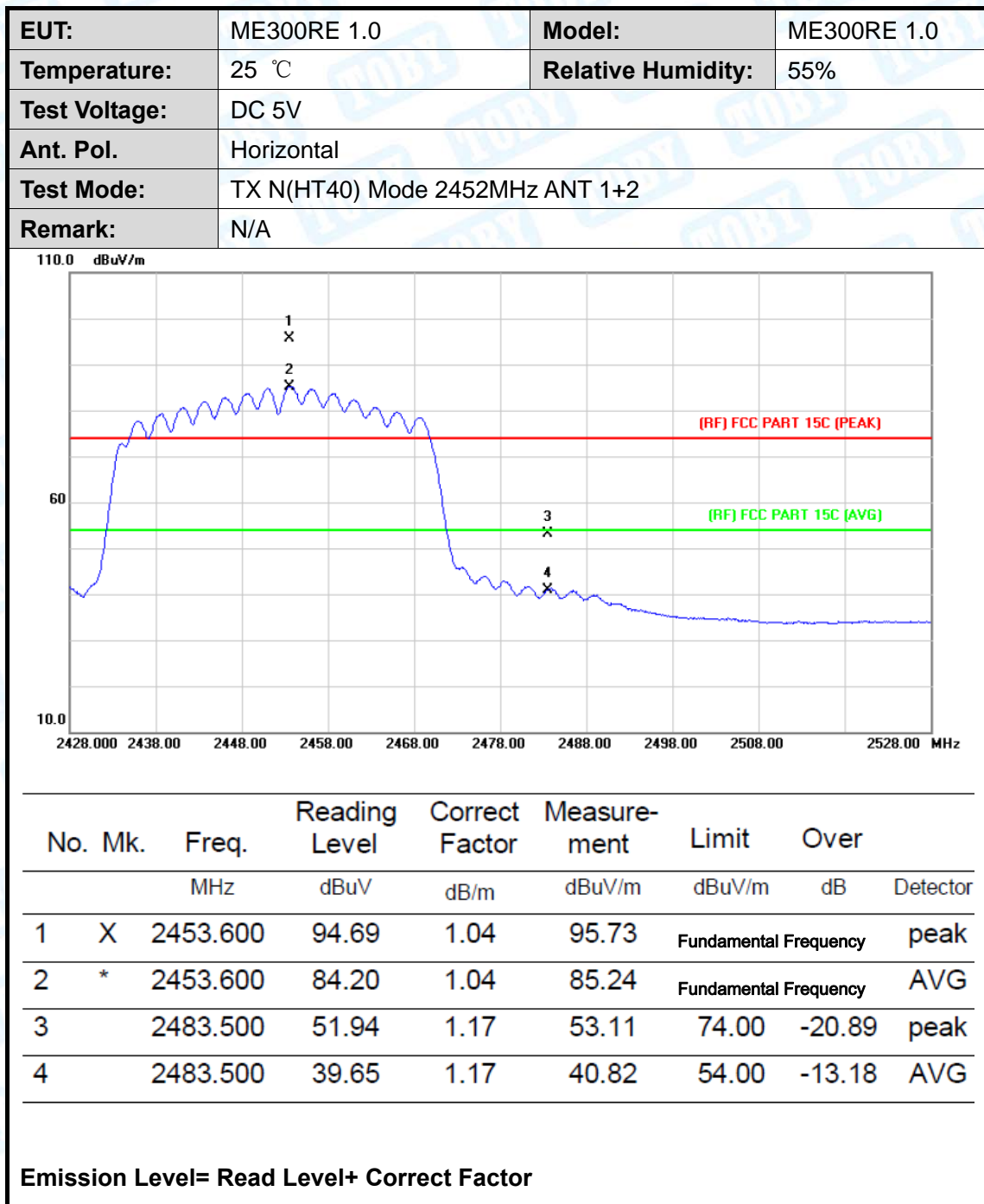


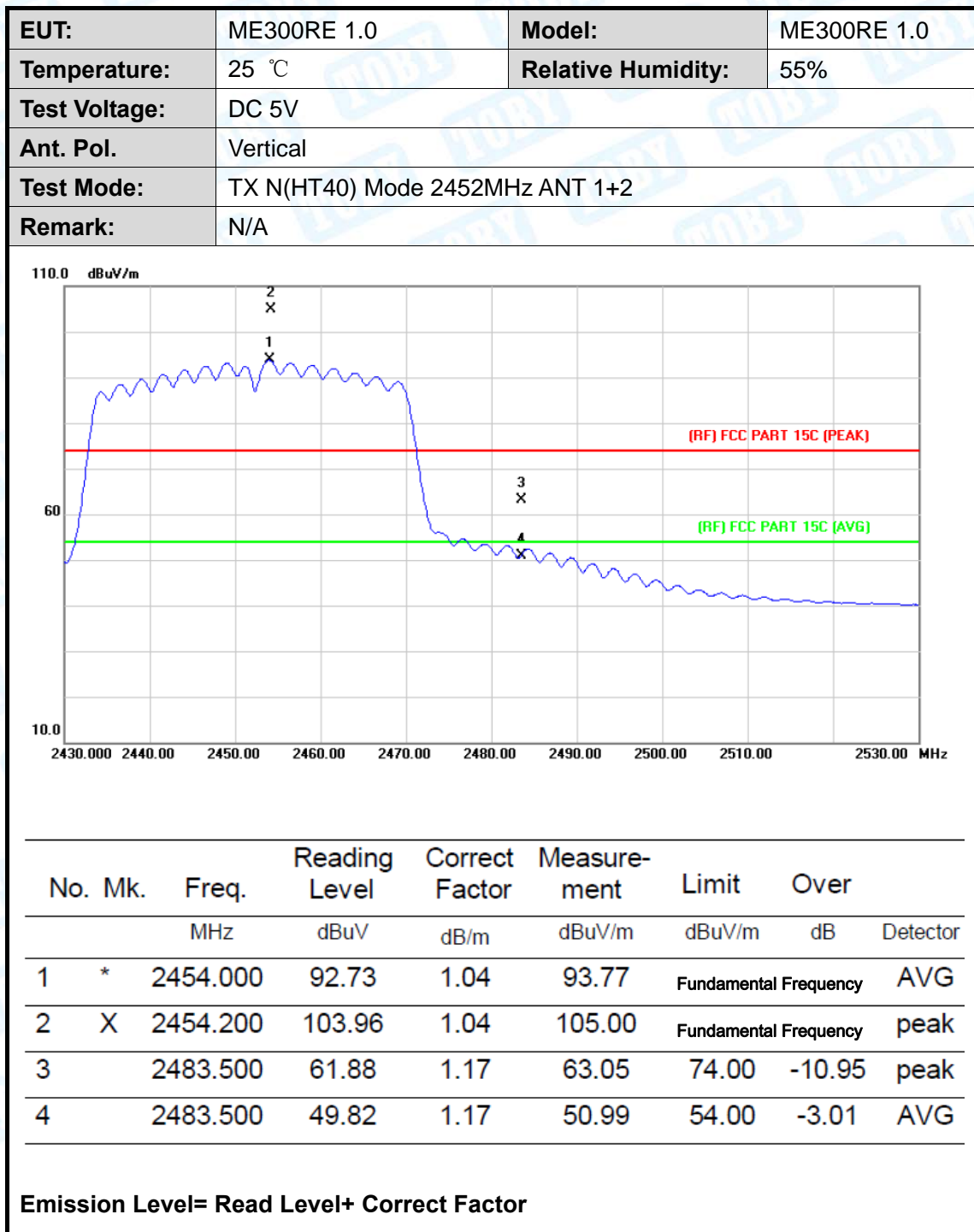
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2422MHz ANT 1+2		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	56.78	0.77	57.55	74.00	-16.45	peak
2		2390.000	42.28	0.77	43.05	54.00	-10.95	AVG
3	X	2424.000	104.24	0.93	105.17	Fundamental Frequency		peak
4	*	2424.000	92.91	0.93	93.84	Fundamental Frequency		AVG

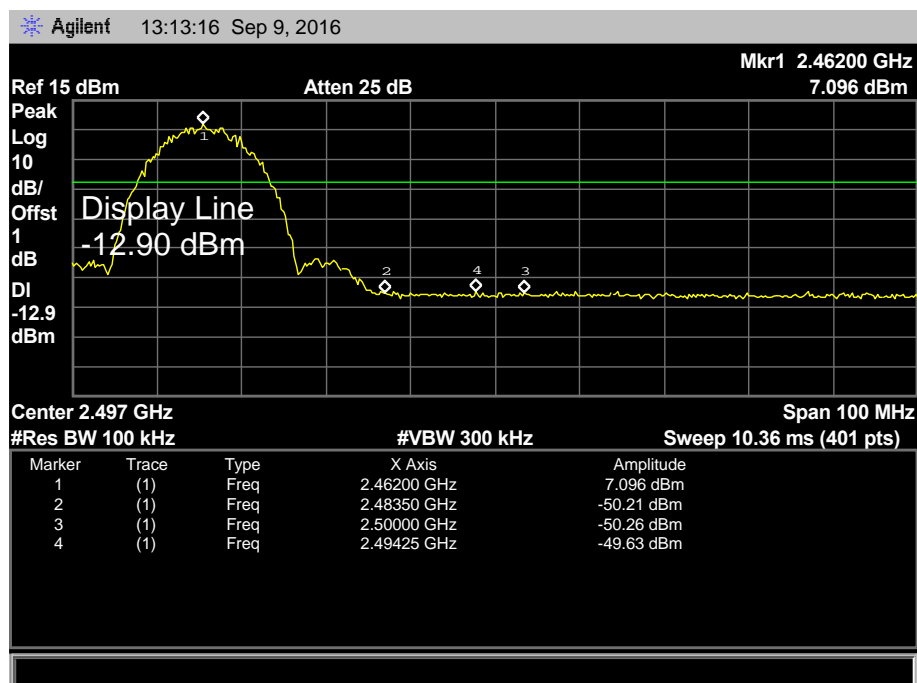
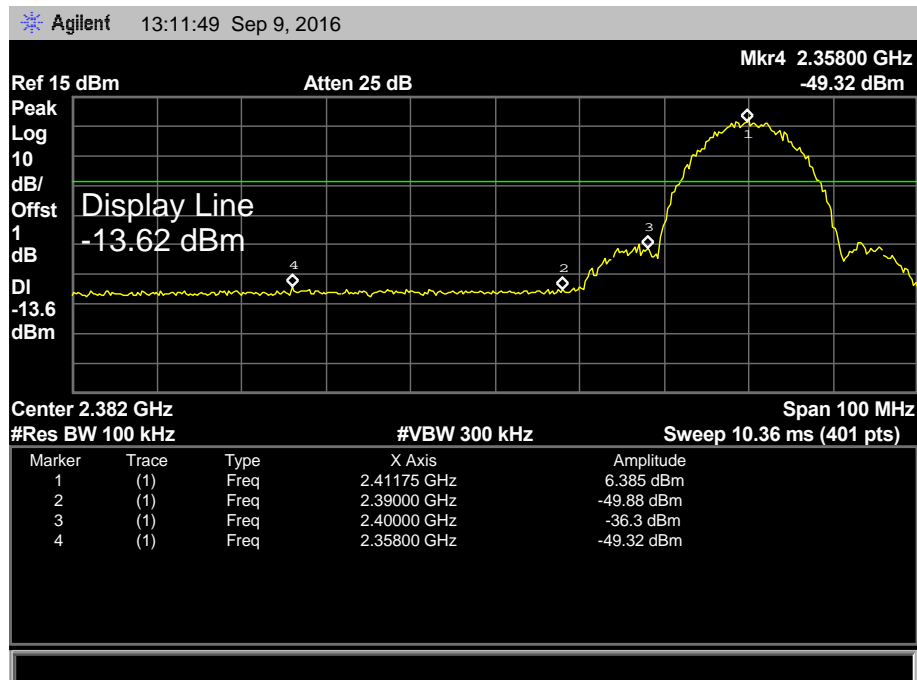
Emission Level= Read Level+ Correct Factor



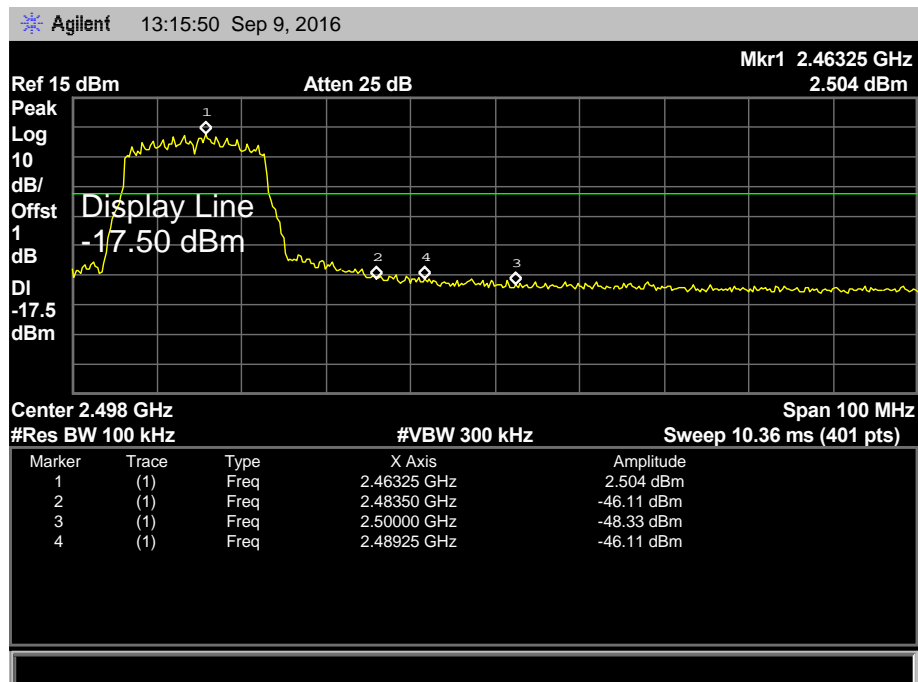
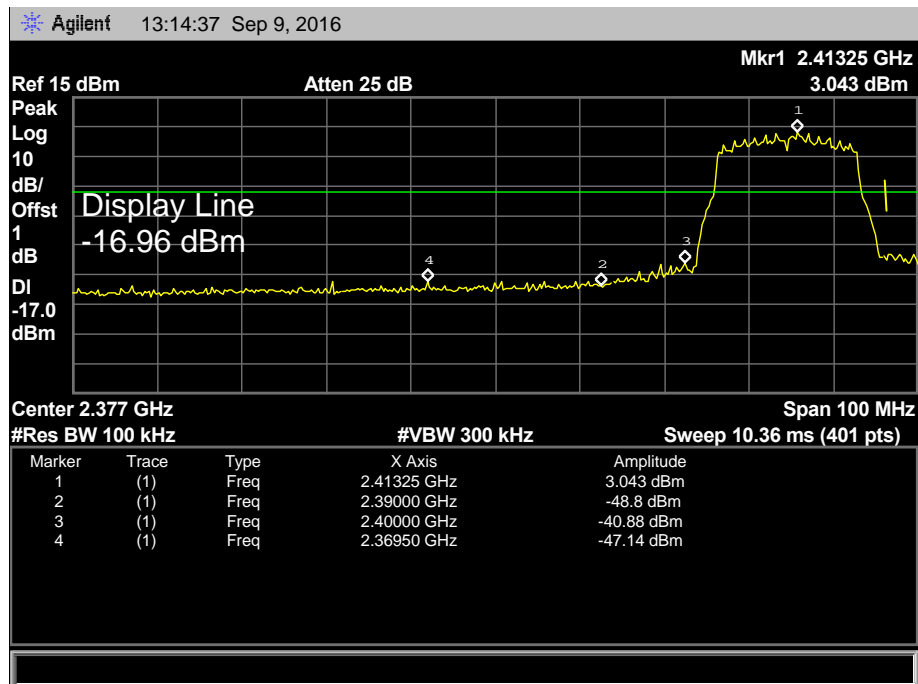


(2) Conducted Test

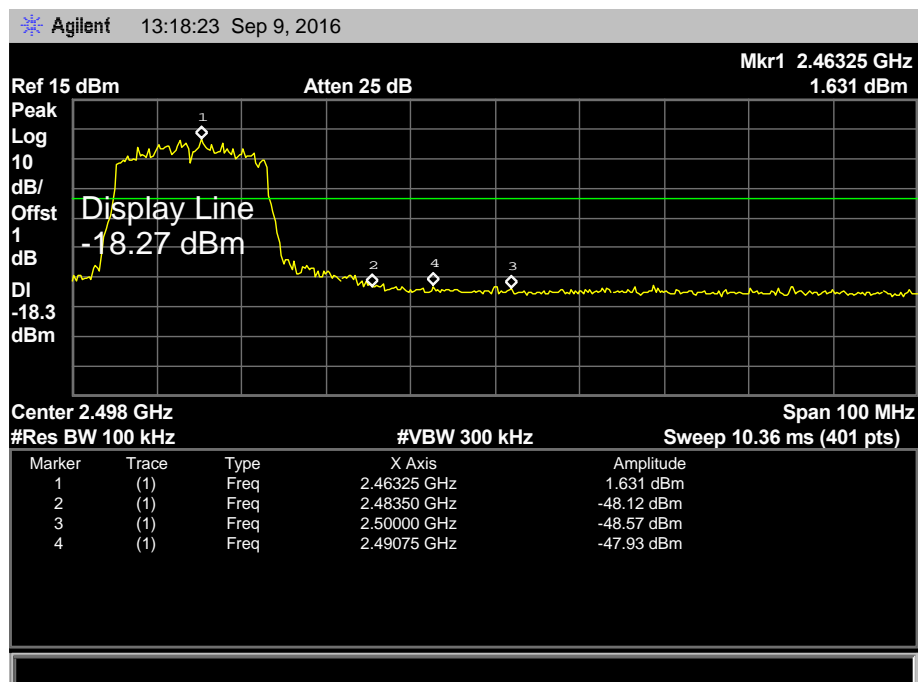
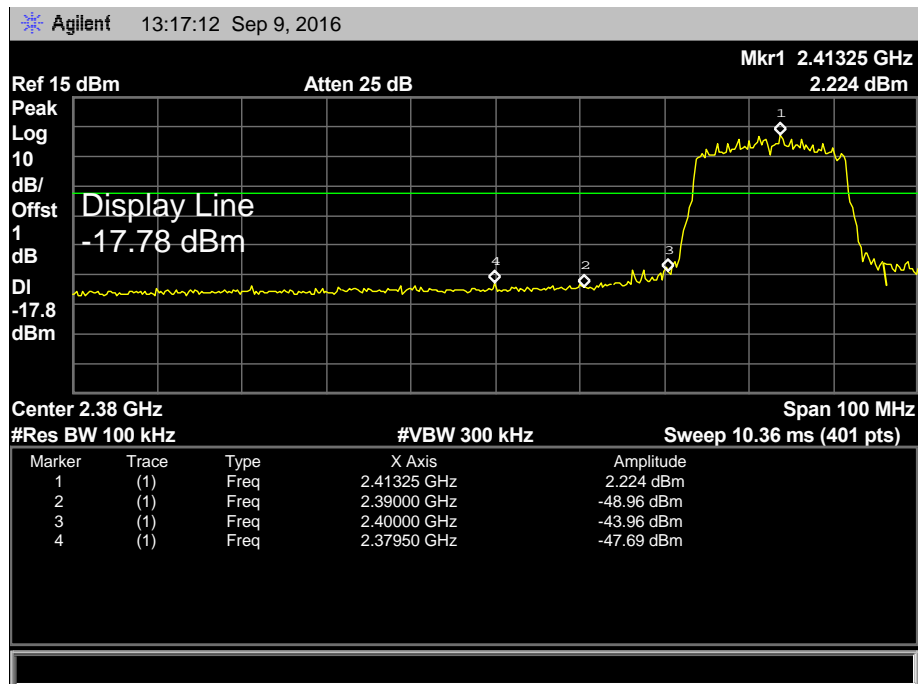
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Test Mode:	TX B Mode 2412MHz / TX B Mode 2462MHz ANT 1		
Remark:	The EUT is programed in continuously transmitting mode		



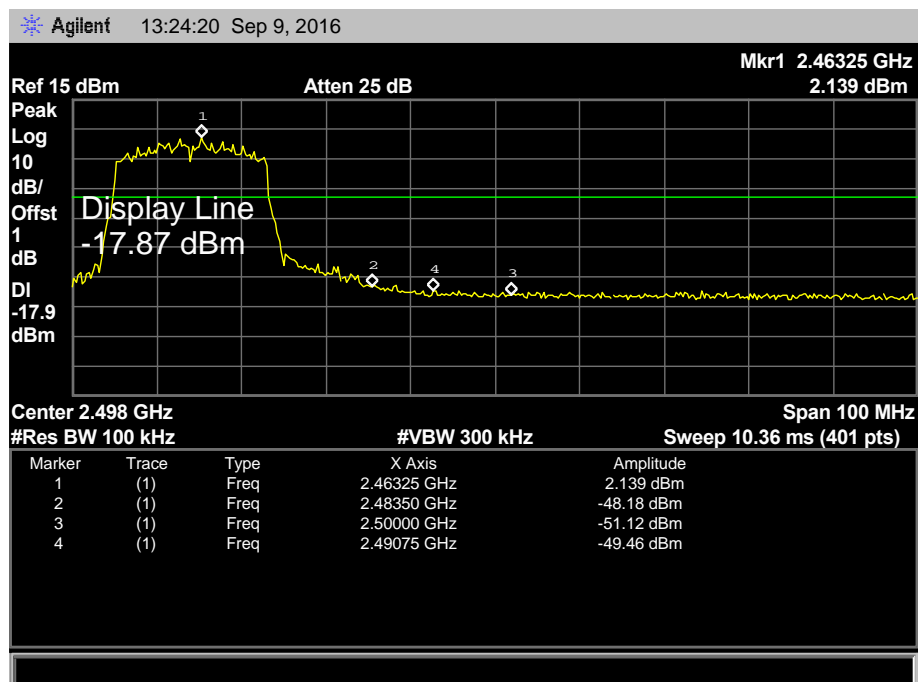
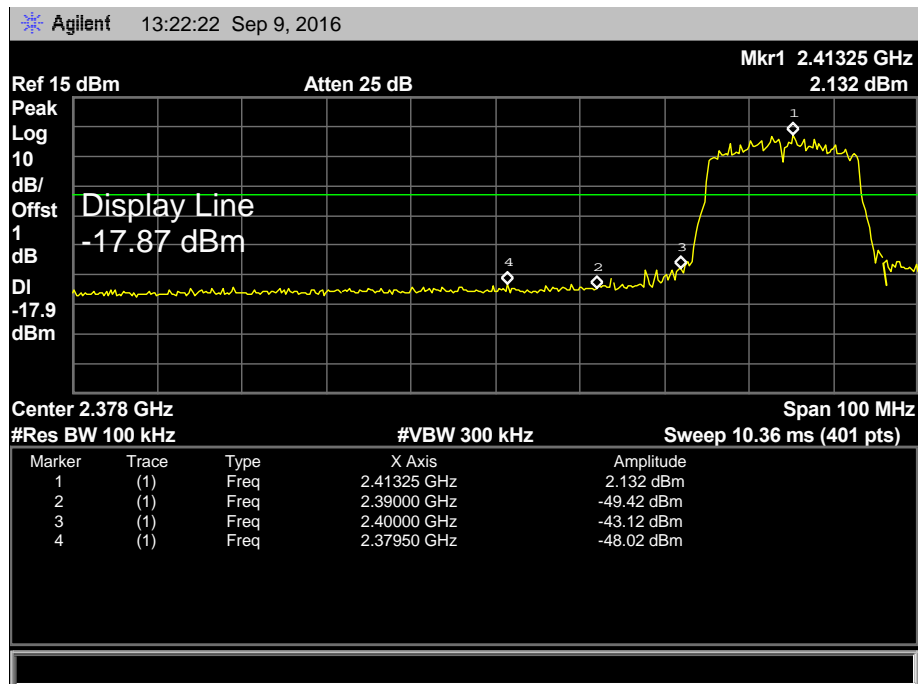
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Test Mode:	TX G Mode 2412MHz / TX G Mode 2462MHz ANT 1		
Remark:	The EUT is programed in continuously transmitting mode		



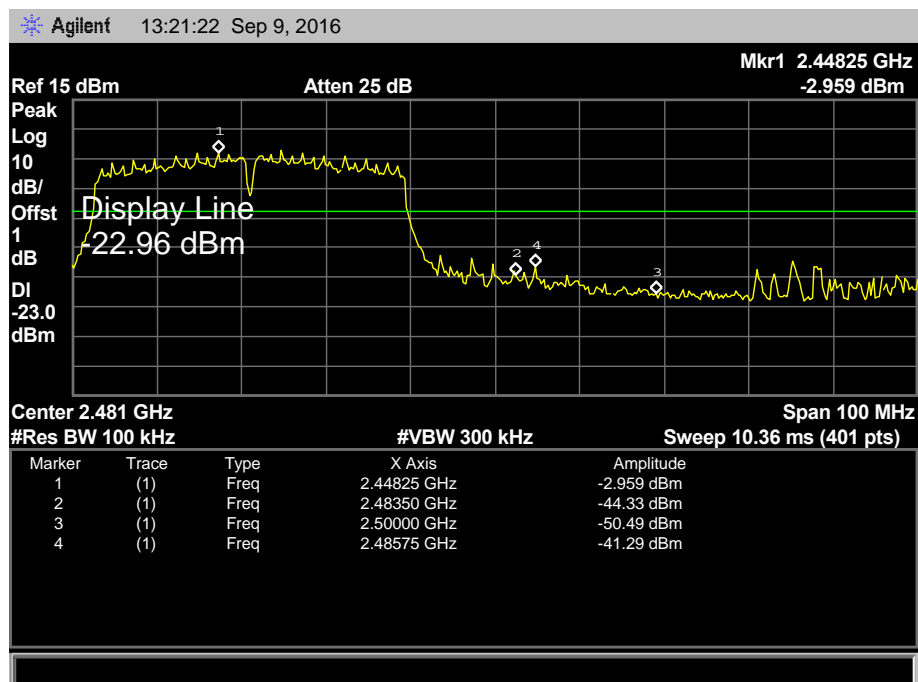
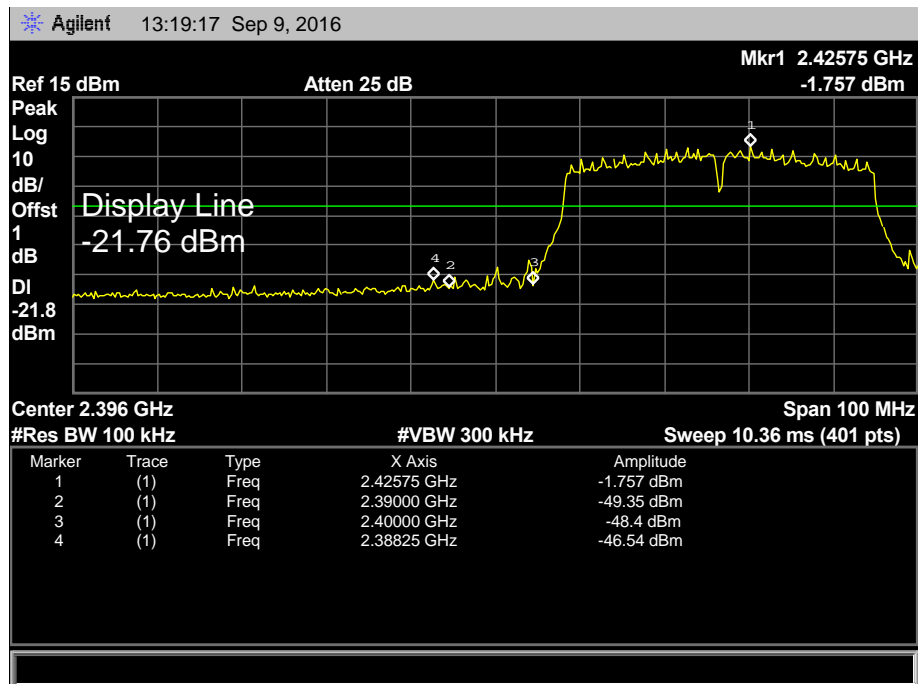
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Test Mode:	TX N(HT20) Mode 2412MHz / TX N(HT20) Mode 2462MHz ANT 1		
Remark:	The EUT is programed in continuously transmitting mode		



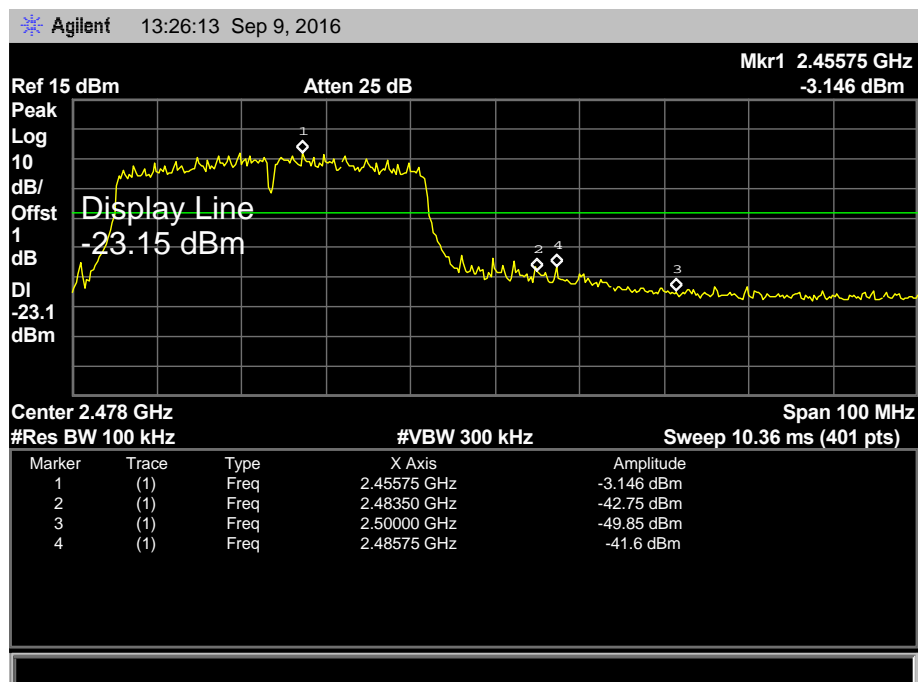
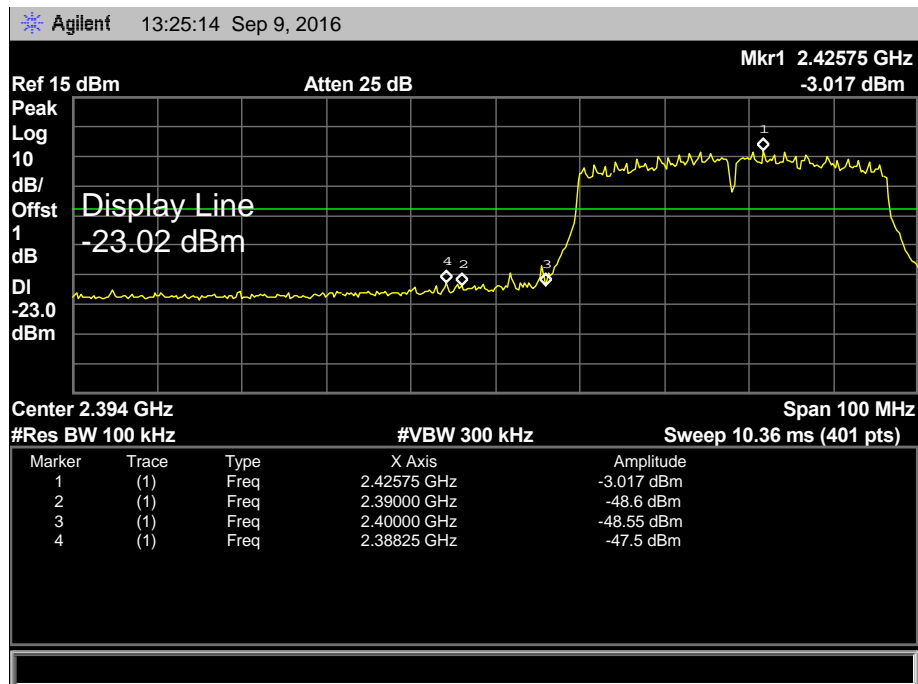
EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Test Mode:	TX N(HT20) Mode 2412MHz / TX N(HT20) Mode 2462MHz ANT 2		
Remark:	The EUT is programed in continuously transmitting mode		



EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Test Mode:	TX N(HT40) Mode 2422MHz / TX N(HT40) Mode 2452MHz ANT 1		
Remark:	The EUT is programed in continuously transmitting mode		



EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Test Mode:	TX N(HT40) Mode 2422MHz / TX N(HT40) Mode 2452MHz ANT 2		
Remark:	The EUT is programed in continuously transmitting mode		



7. Bandwidth Test

7.1 Test Standard and Limit

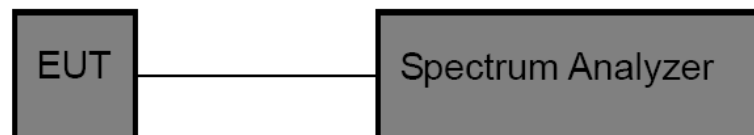
7.1.1 Test Standard

FCC Part 15.247 (a)(2)

7.1.2 Test Limit

FCC Part 15 Subpart C(15.247)/RSS-210		
Test Item	Limit	Frequency Range(MHz)
Bandwidth	≥ 500 KHz (6dB bandwidth)	2400~2483.5

7.2 Test Setup



7.3 Test Procedure

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) The bandwidth is measured at an amplitude level reduced 6dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst –case (i.e the widest) bandwidth.
- (3)Measure the channel separation the spectrum analyzer was set to Resolution Bandwidth:100 kHz, and Video Bandwidth:300 kHz, Detector: Peak, Sweep Time set auto.

7.4 EUT Operating Condition

The EUT was set to continuously transmitting in each mode and low, middle and high channel for the test.

7.5 Test Data

EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Test Mode:	TX 802.11B Mode ANT 1		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	8.361	13.9484	>=0.5
2437	7.934	13.9369	
2462	7.938	13.9324	
802.11B Mode (Antenna 1)			
2412 MHz			

Agilent11:52:05 Sep 9, 2016

Ref 15 dBm

Atten 25 dB

#Peak

Log

10

dB/

Offst

1

dB

Center

2.412000000 GHz

Center 2.412 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 20 MHz

Sweep 4 ms (401 pts)

Occupied Bandwidth

13.9484 MHz

Occ BW % Pwr

99.00 %

x dB

-6.00 dB

Transmit Freq Error

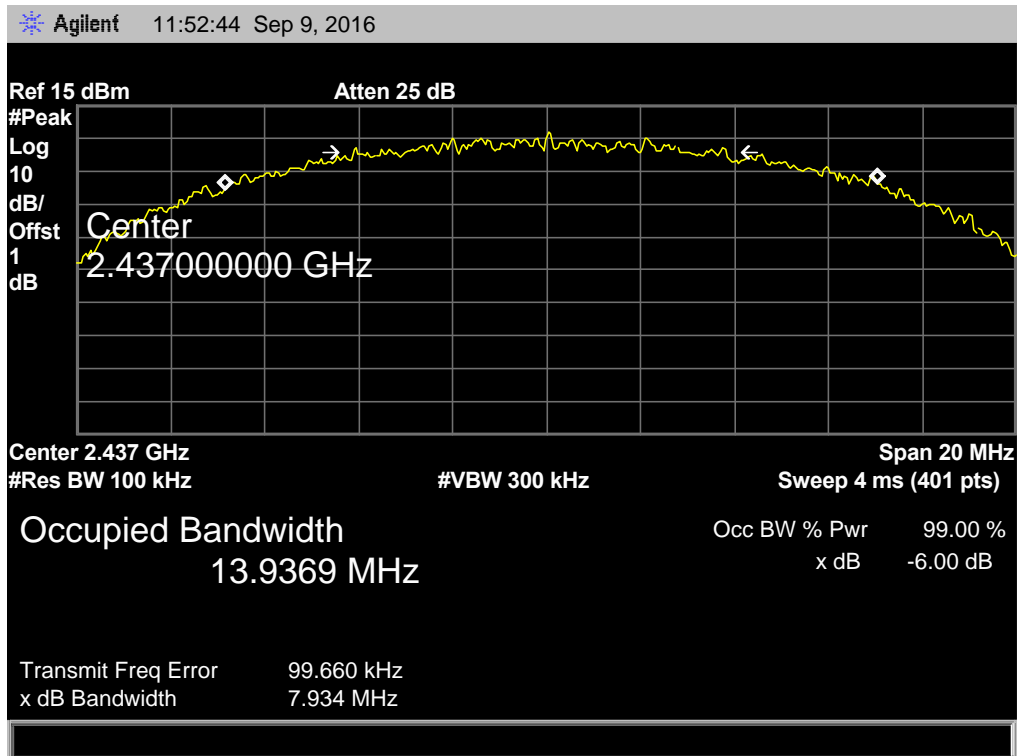
103.025 kHz

x dB Bandwidth

8.361 MHz

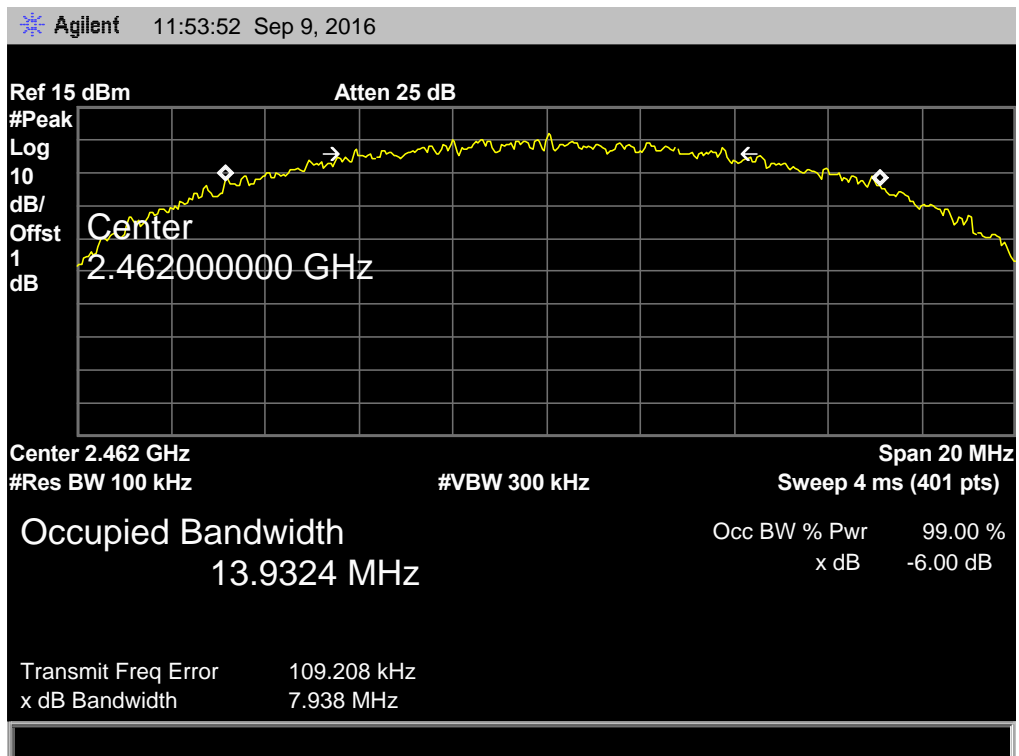
802.11B Mode (Antenna 1)

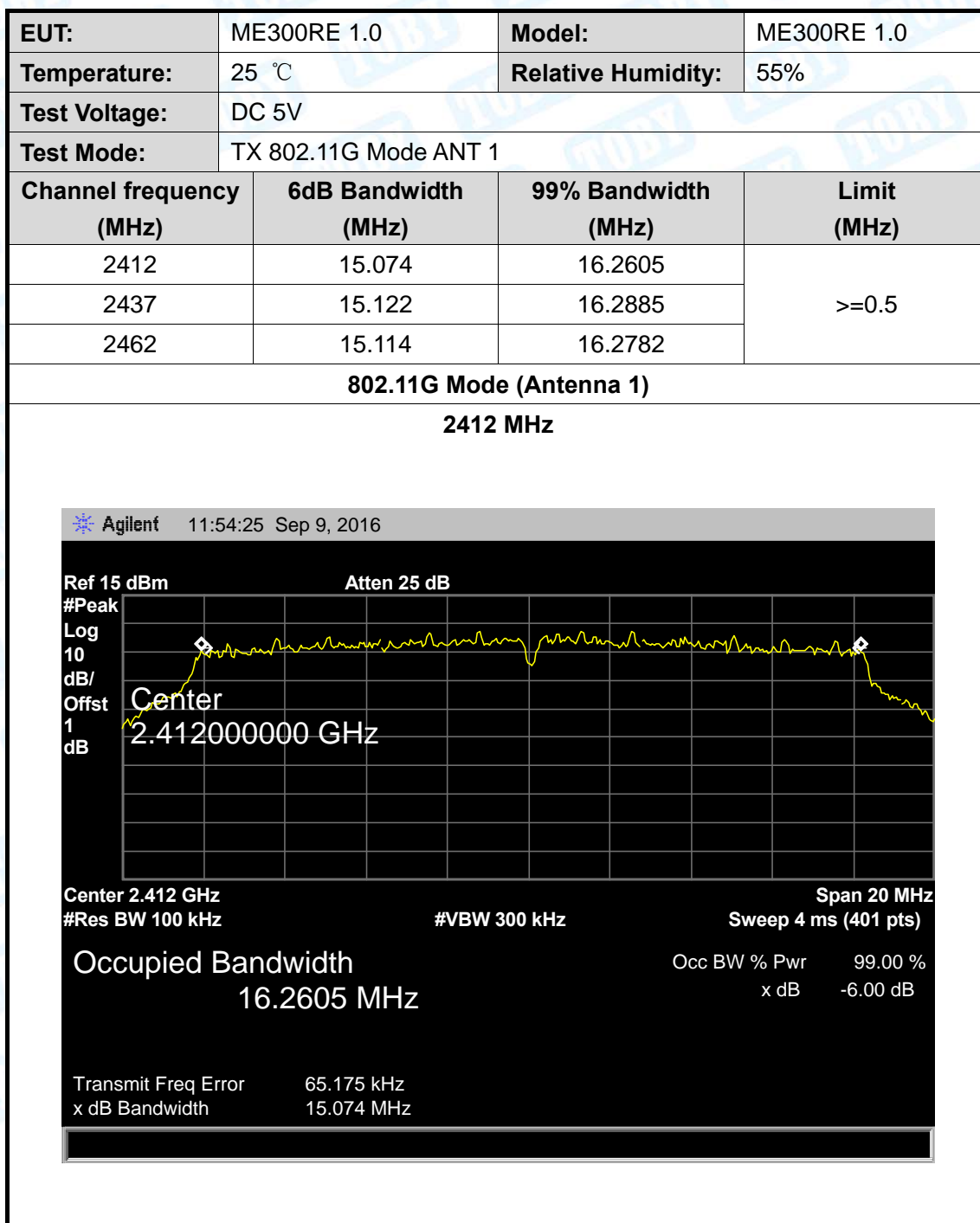
2437 MHz



802.11B Mode (Antenna 1)

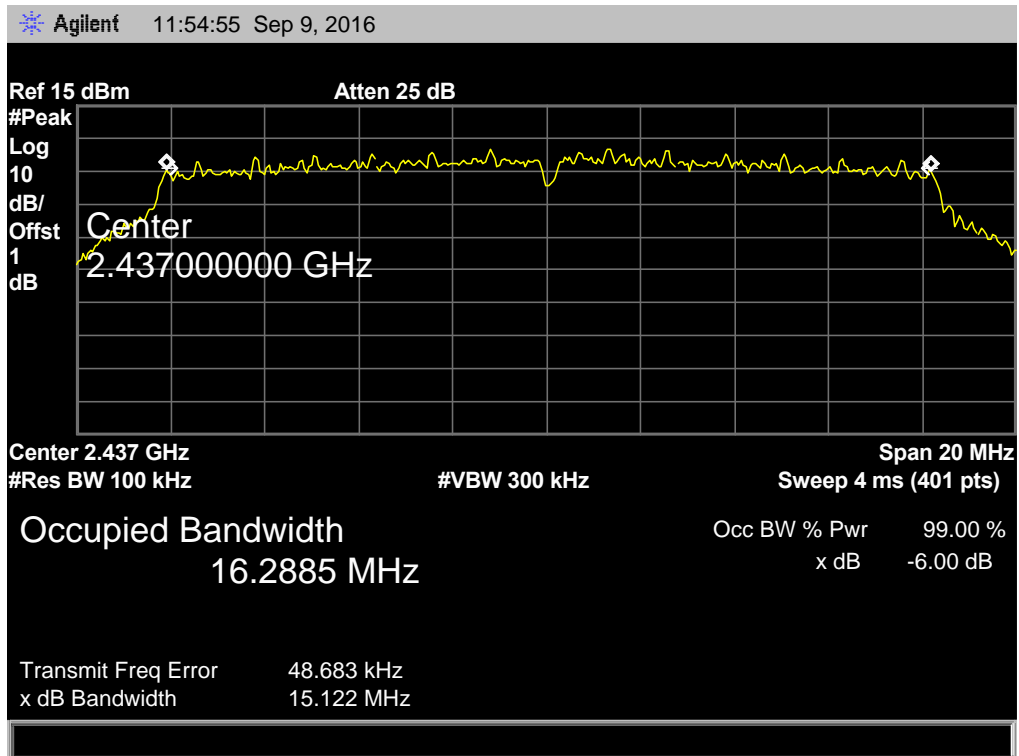
2462 MHz





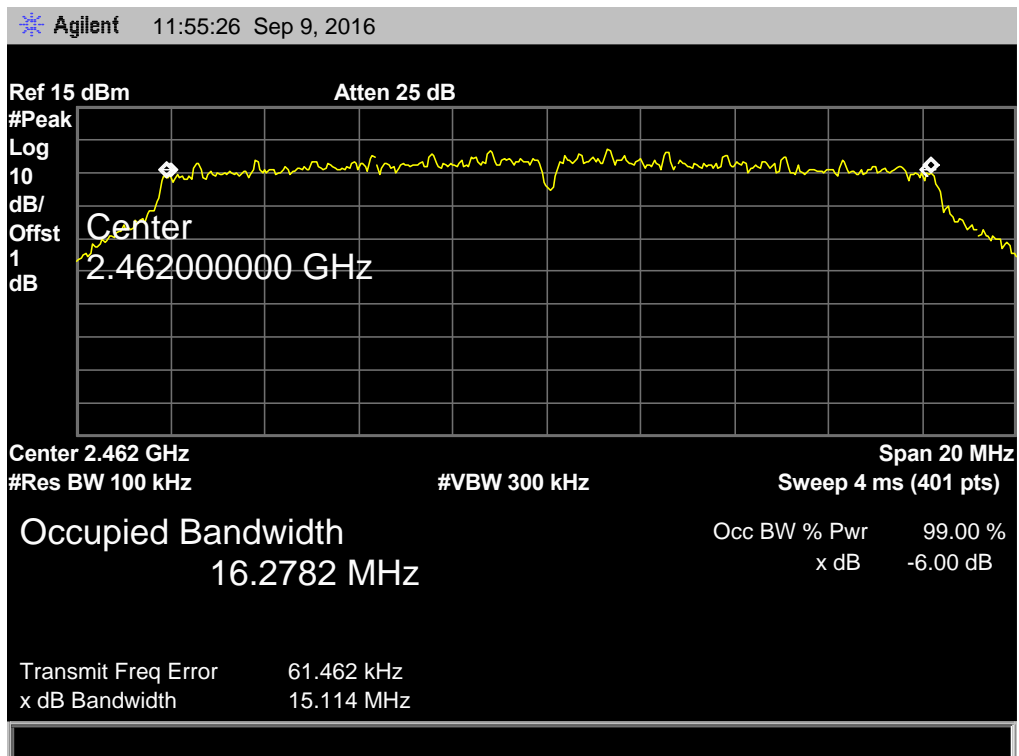
802.11G Mode (Antenna 1)

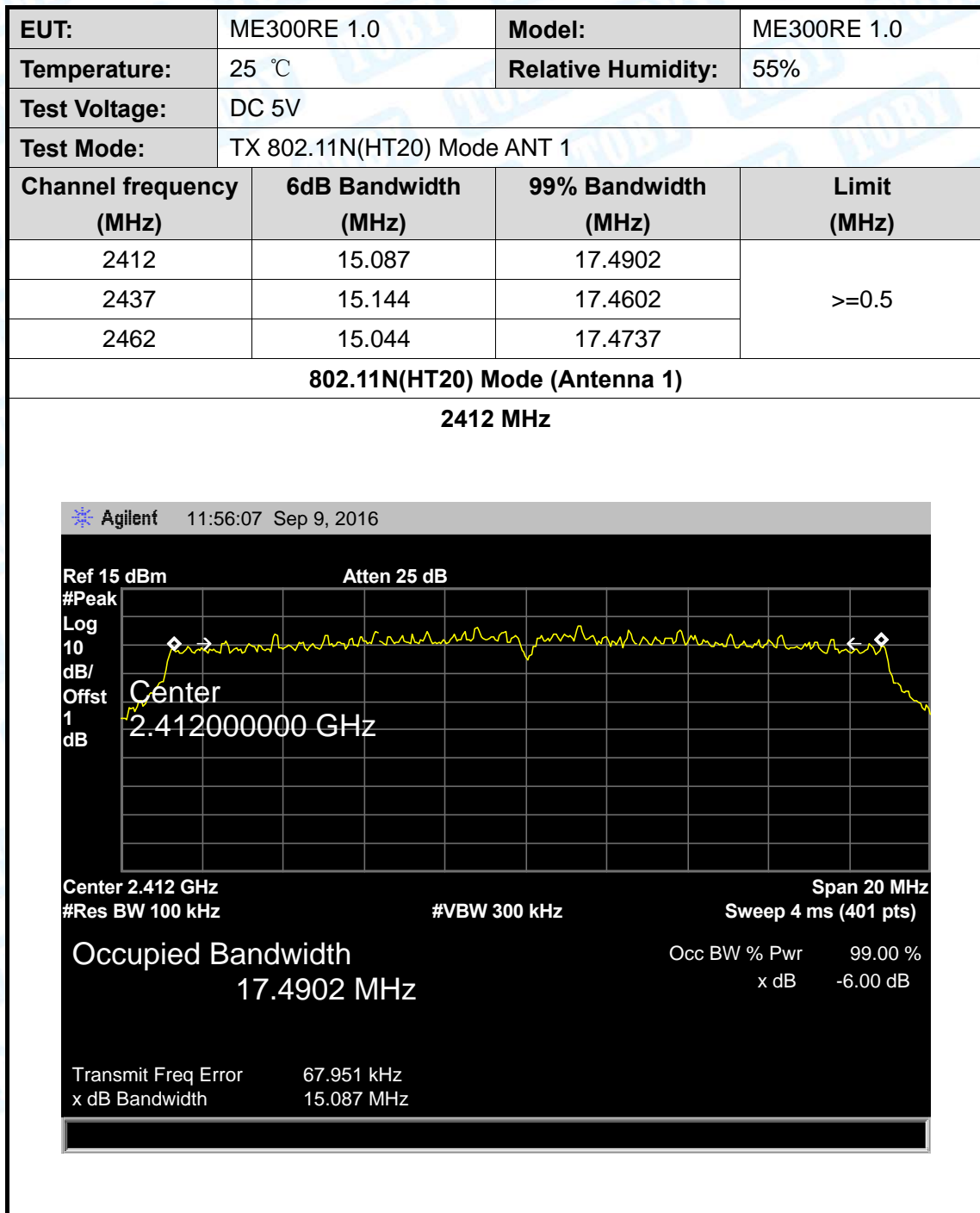
2437 MHz



802.11G Mode (Antenna 1)

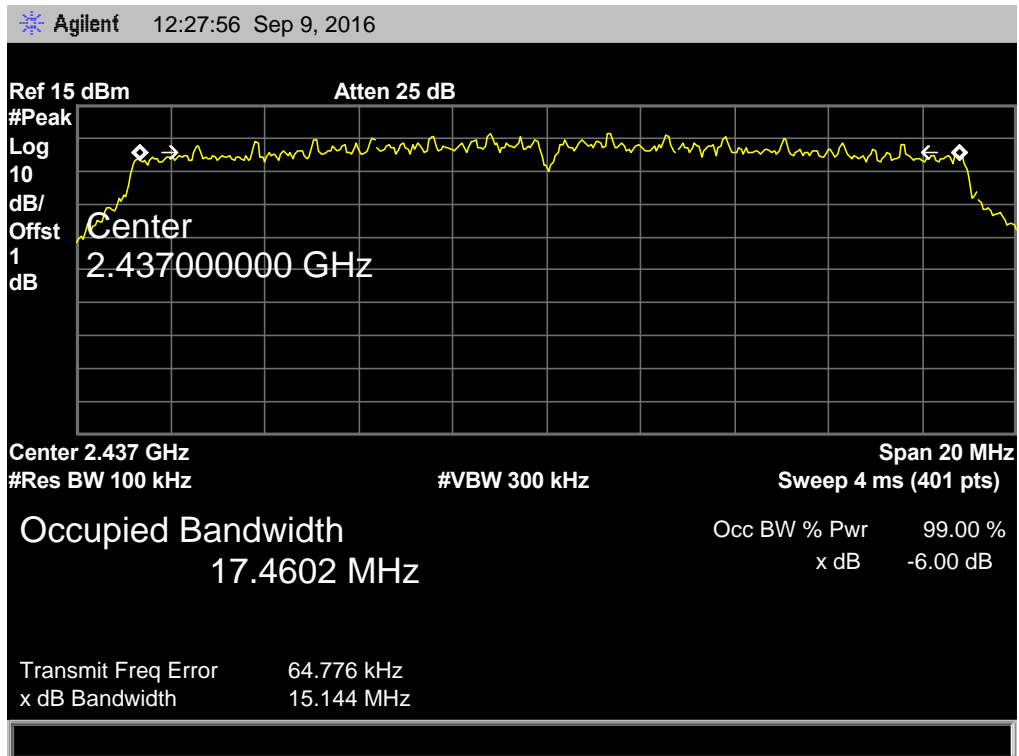
2462 MHz





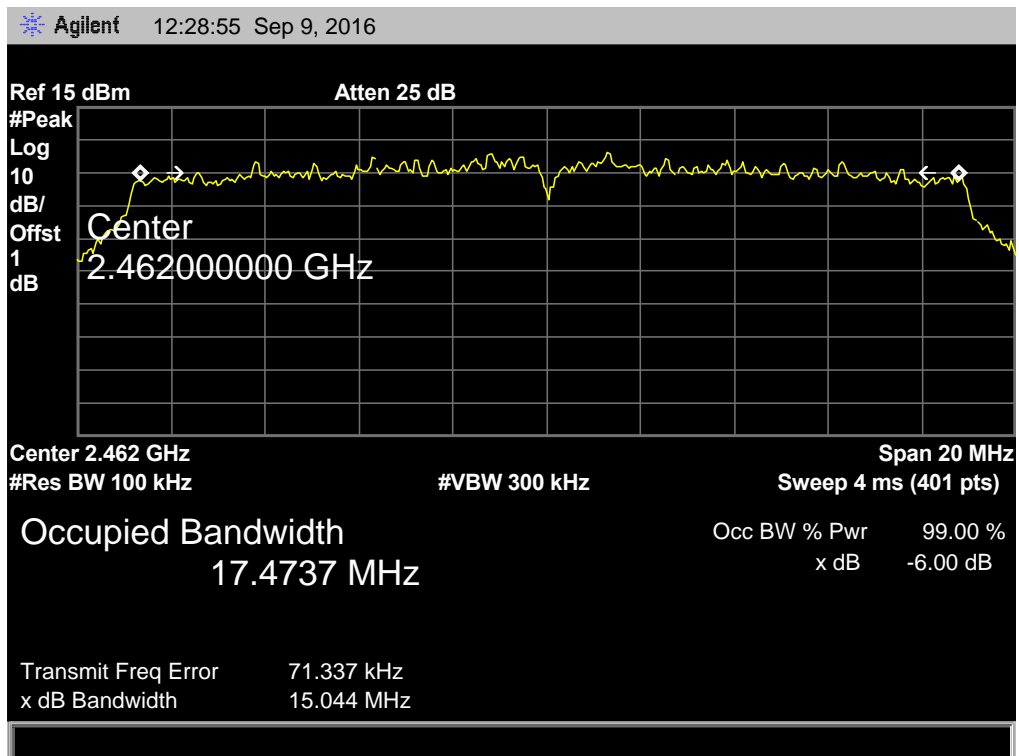
802.11N(HT20) Mode

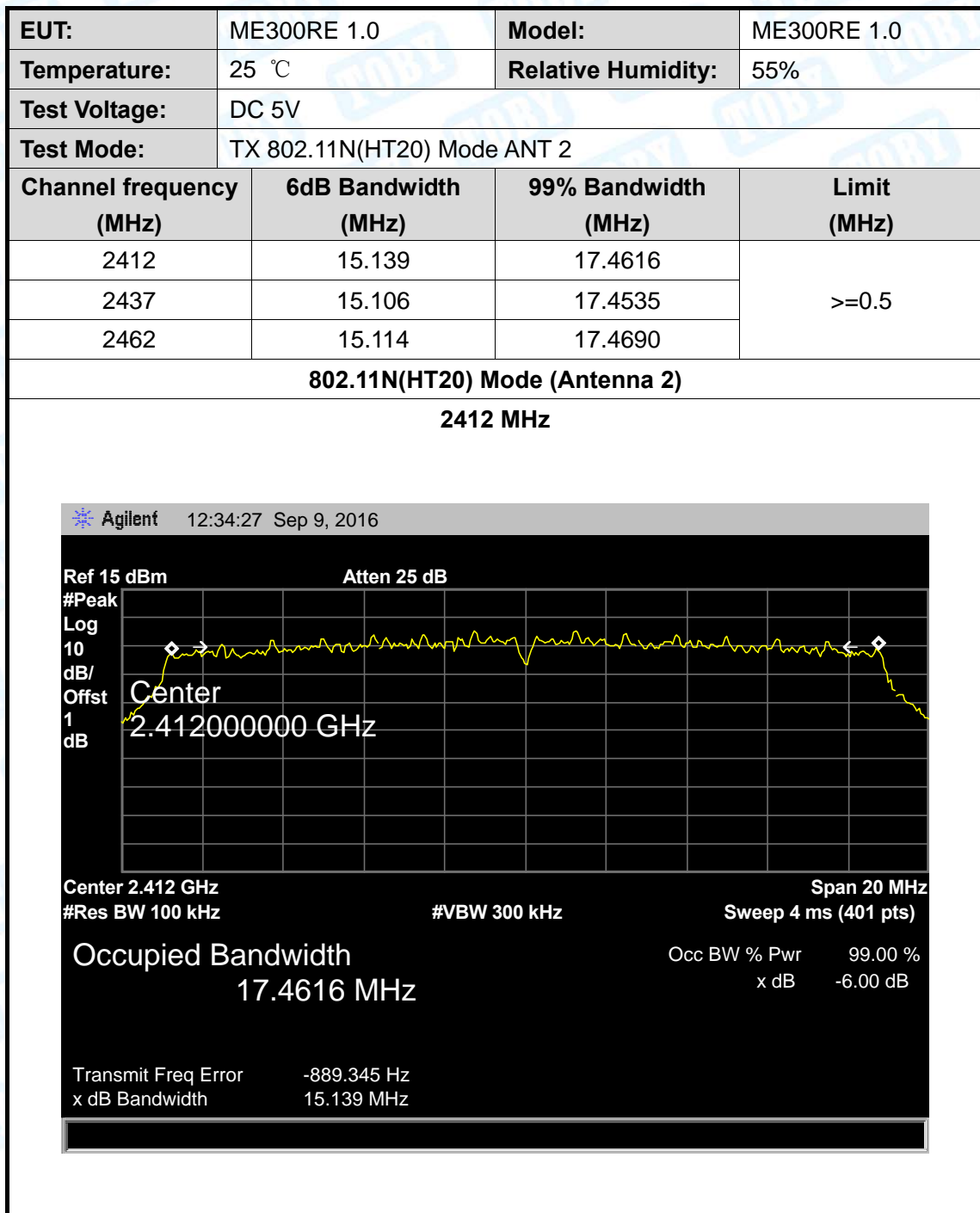
2437 MHz



802.11N(HT20) Mode

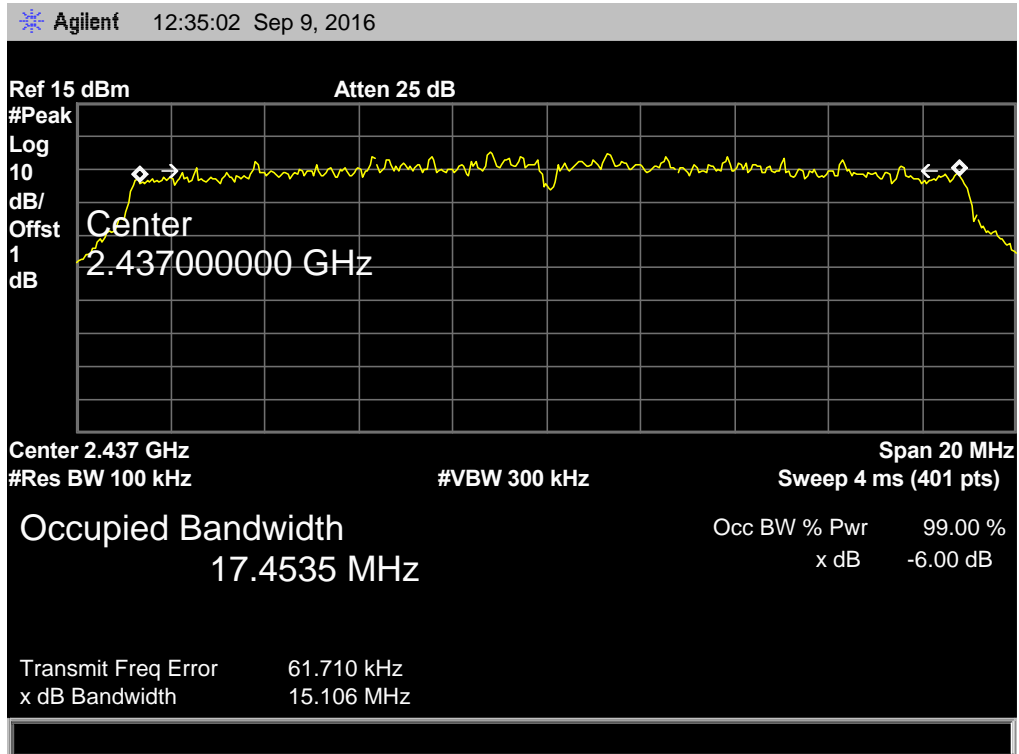
2462 MHz





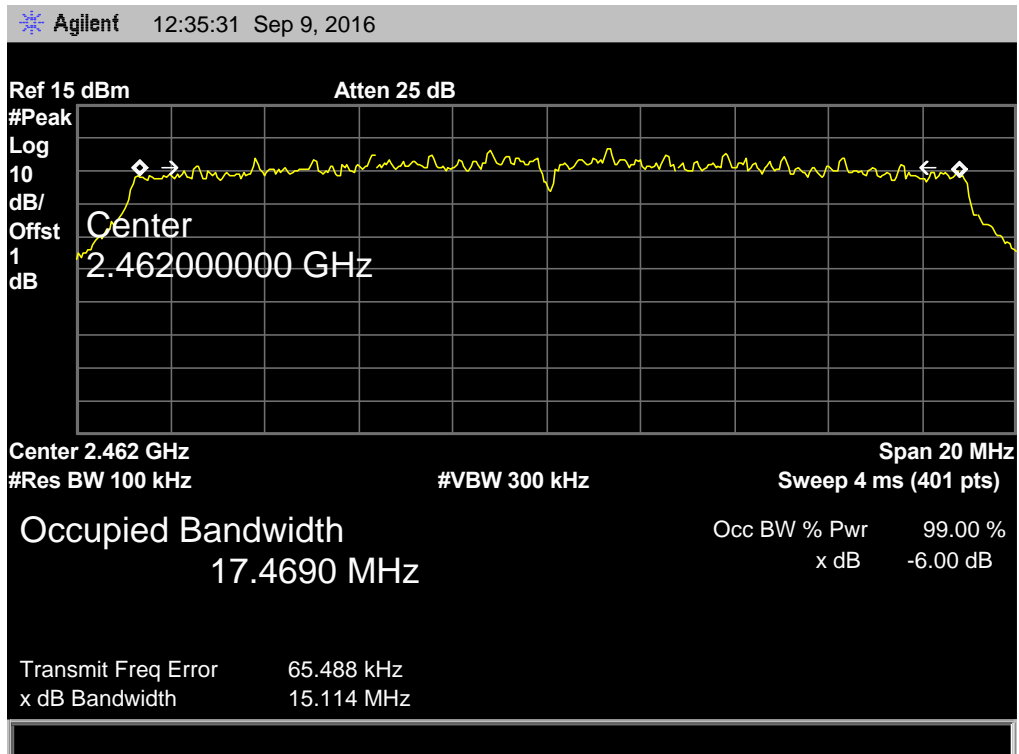
802.11N(HT20) Mode (Antenna 2)

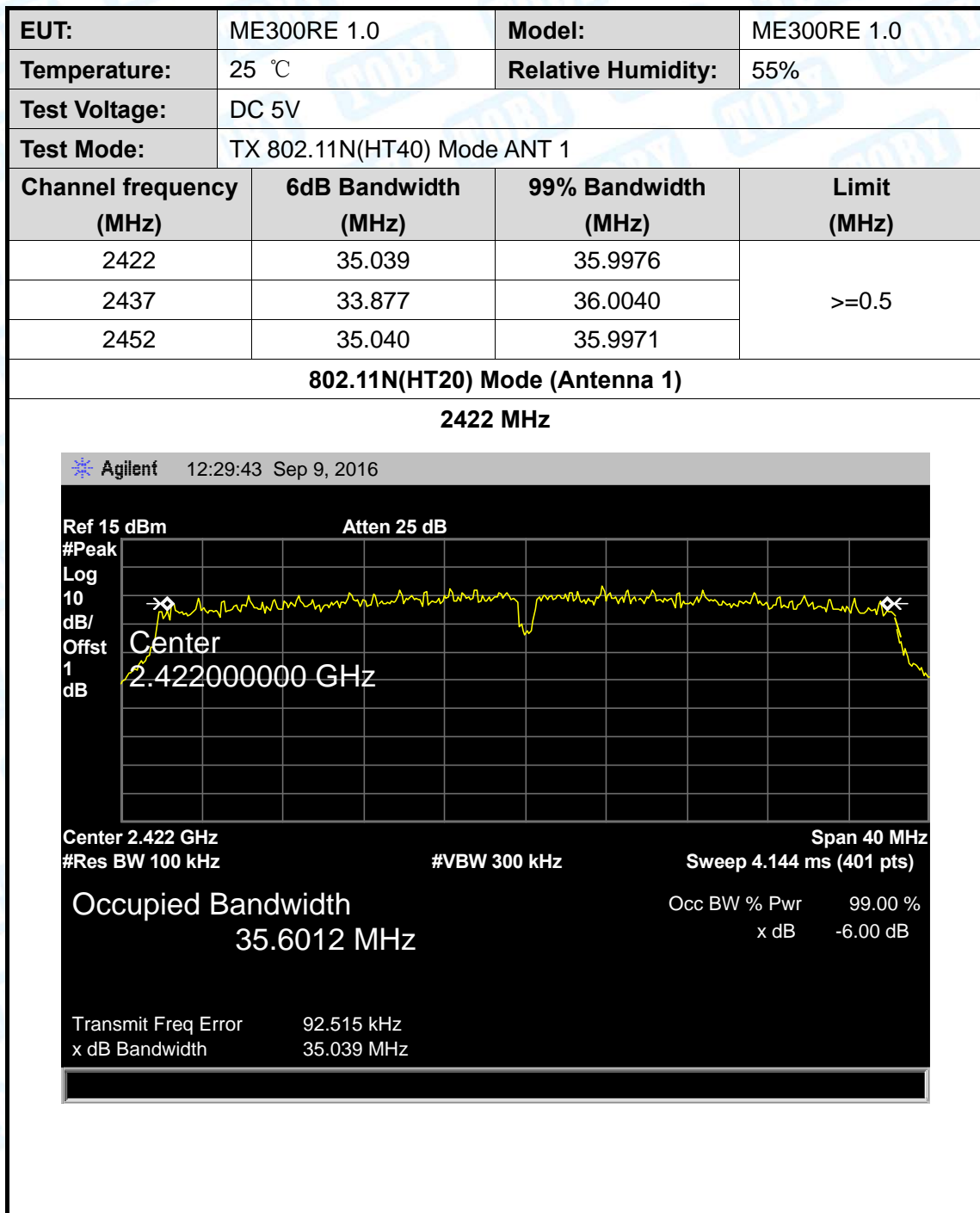
2437 MHz



802.11N(HT20) Mode (Antenna 2)

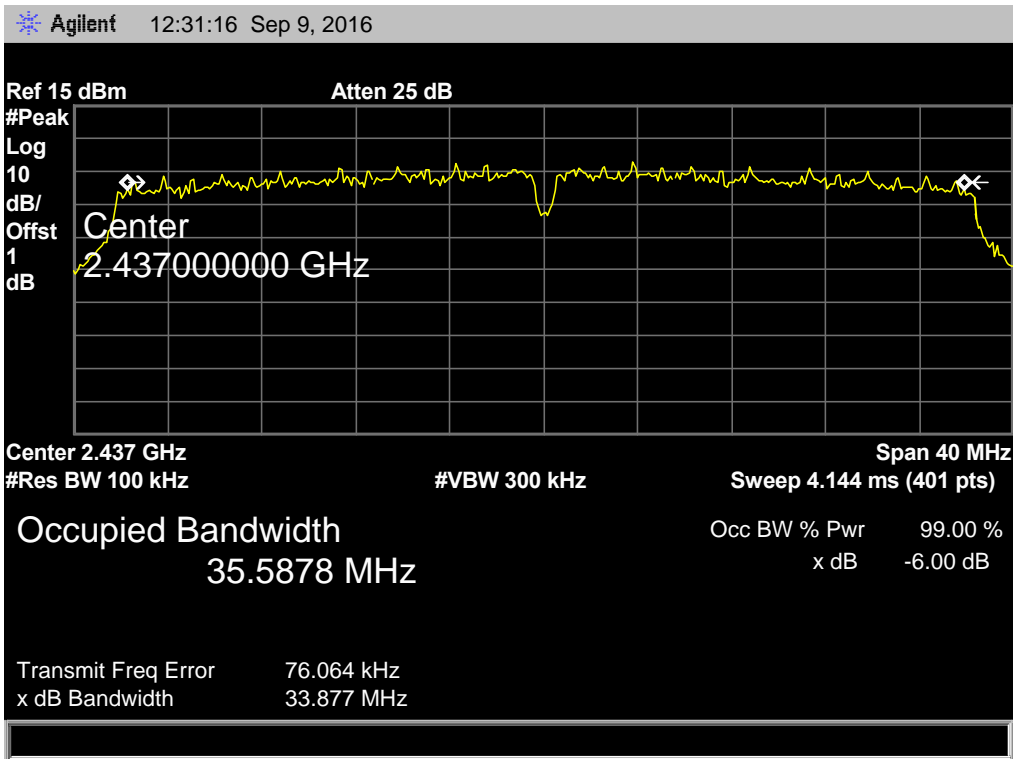
2462 MHz





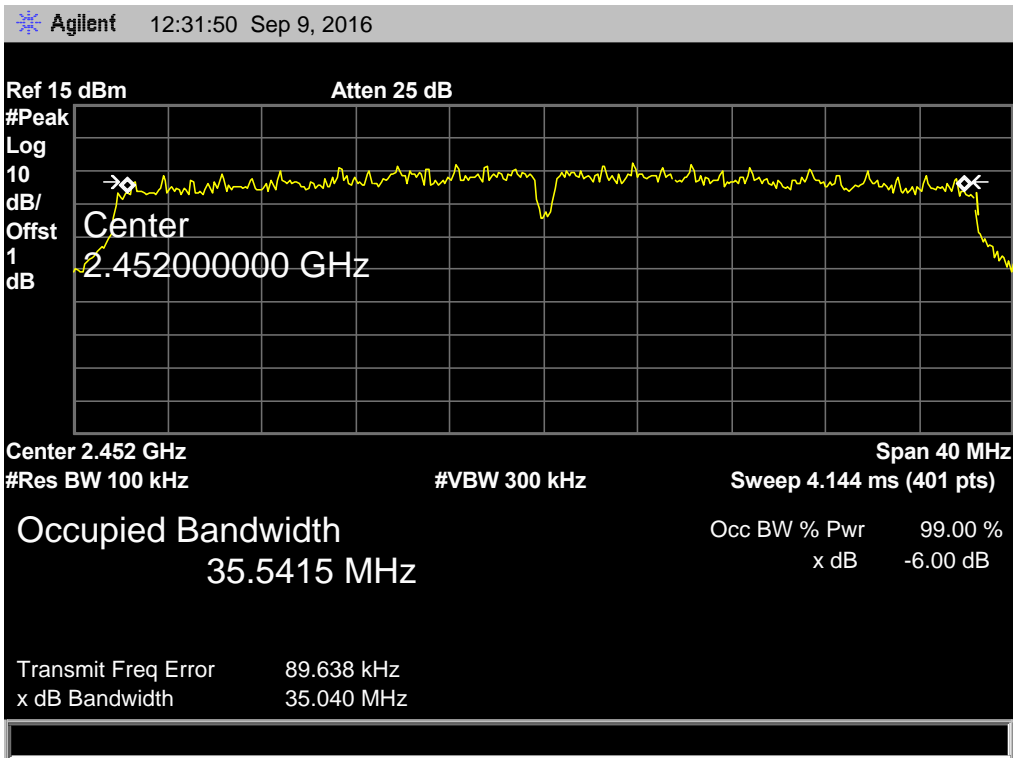
802.11N(HT40) Mode (Antenna 1)

2437 MHz



802.11N(HT40) Mode (Antenna 1)

2452 MHz



EUT:	ME300RE 1.0	Model:	ME300RE 1.0
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	DC 5V		
Test Mode:	TX 802.11N(HT40) Mode ANT 2		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2422	35.086	35.5949	>=0.5
2437	35.103	35.7033	
2452	35.058	35.6214	
802.11N(HT20) Mode (Antenna 2)			
2422 MHz			

Agilent12:36:03 Sep 9, 2016

Ref 15 dBm

Atten 25 dB

#Peak

Log

10

dB/

Offst

1

dB

Center

2.422000000 GHz

Center 2.422 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 40 MHz

Sweep 4.144 ms (401 pts)

Occupied Bandwidth

35.5949 MHz

Occ BW % Pwr

99.00 %

x dB

-6.00 dB

Transmit Freq Error

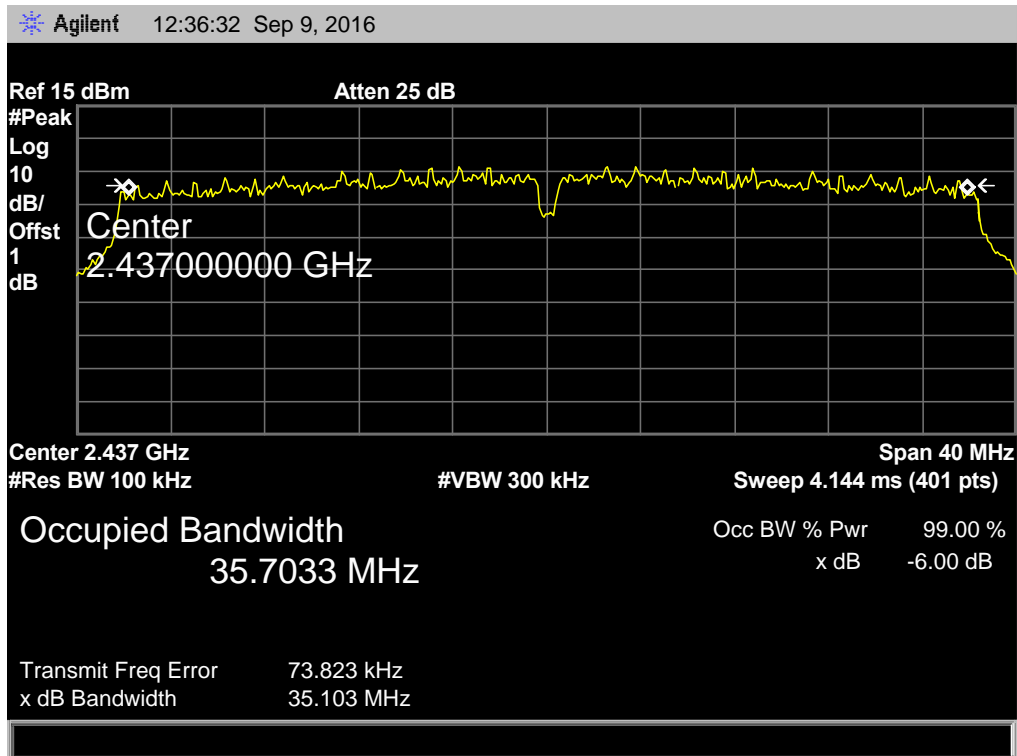
132.634 kHz

x dB Bandwidth

35.086 MHz

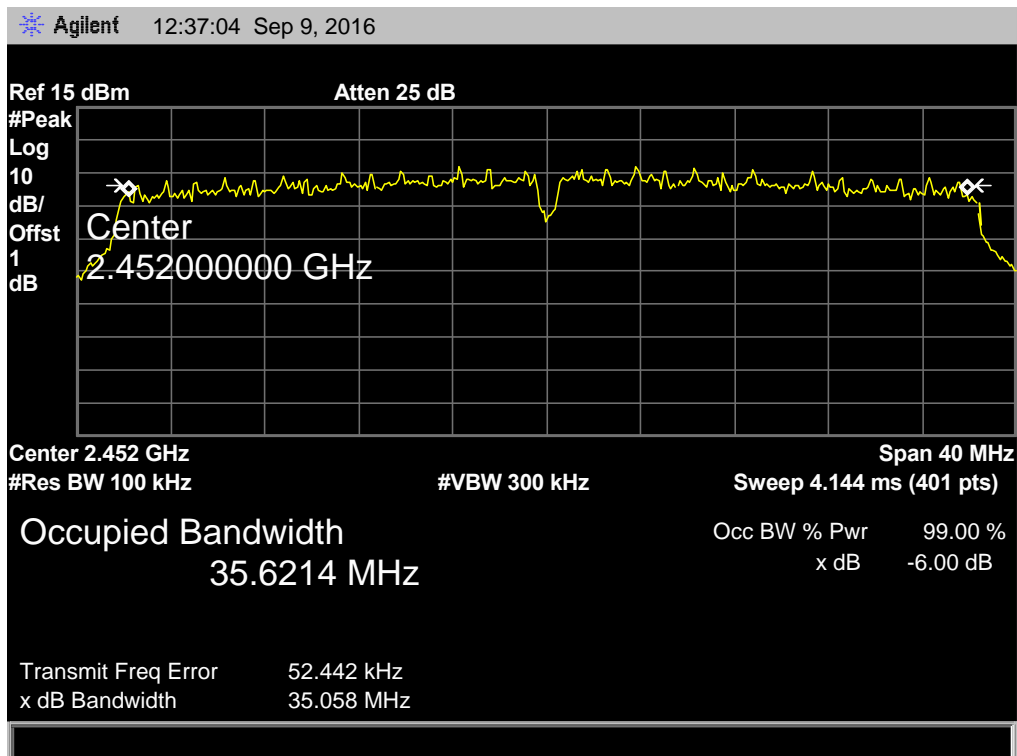
802.11N(HT40) Mode (Antenna 2)

2437 MHz



802.11N(HT40) Mode (Antenna 2)

2452 MHz



8. Peak Output Power Test

8.1 Test Standard and Limit

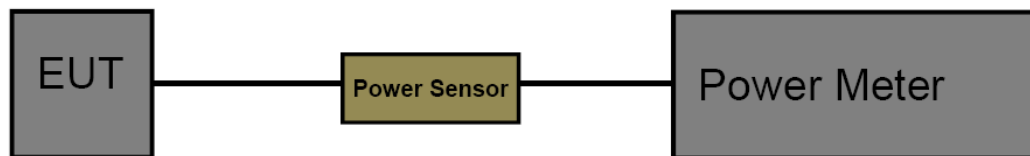
8.1.1 Test Standard

FCC Part 15.247 (b)

8.1.2 Test Limit

FCC Part 15 Subpart C(15.247)/RSS-210		
Test Item	Limit	Frequency Range(MHz)
Peak Output Power	1 Watt or 30 dBm	2400~2483.5

8.2 Test Setup



8.3 Test Procedure

The measurement is according to section 9.1.2 of KDB 558074 D01 DTS Meas Guidance v03r05.

The EUT was connected to RF power meter via a broadband power sensor as show the block above. The power sensor video bandwidth is greater than or equal to the DTS bandwidth of the equipment.

8.4 EUT Operating Condition

The EUT was set to continuously transmitting in the max power during the test.

8.5 Test Data

EUT:	ME300RE 1.0	Model Name :	ME300RE 1.0				
Temperature:	25 °C	Relative Humidity:	55%				
Test Voltage:	DC 5V						
Test Mode:	TX 802.11 b/g Mode						
Test Mode	Frequency (MHz)	Test Data					Limit (dBm)
		ANT 1 (dBm)	ANT 2 (dBm)	Duty Factor (dB)	ANT 1 Power (dBm)	ANT 2 Power (dBm)	
802.11b	2412	22.09	21.86	0	22.09	21.86	30
	2437	22.19	21.63	0	22.19	21.63	
	2462	22.13	21.59	0	22.13	21.59	
802.11g	2412	21.87	21.34	0	21.87	21.34	
	2437	21.88	21.30	0	21.88	21.30	
	2462	21.94	21.37	0	21.94	21.37	
Result: PASS							

EUT:	ME300RE 1.0	Model Name :	ME300RE 1.0			
Temperature:	25 °C	Relative Humidity:	55%			
Test Voltage:	DC 5V					
Test Mode:	TX 802.11 n(HT20)/n(HT40) Mode					
Test Mode	Frequency (MHz)	Test Data				Limit (dBm)
		ANT 1 (dBm)	ANT 2 (dBm)	Duty Factor (dB)	Total Power (dBm)	
802.11n (HT20)	2412	19.03	18.34	0	21.71	28.39
	2437	19.11	18.37	0	21.77	
	2462	19.24	18.41	0	21.86	
802.11n (HT40)	2422	19.08	18.43	0	21.78	
	2437	19.12	18.22	0	21.70	
	2452	19.17	18.24	0	21.74	
Result: PASS						
Note: When ANT1 and ANT2 transmitting simultaneously, the total Antenna Gain=Gain 1+Gani 2=7.61dBi> 6 dBi. So $P_{out} = P_{limit} - (G_{TX} - 6) = 30 - 1.61 = 28.39$						

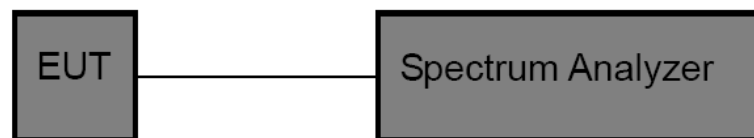
9. Power Spectral Density Test

9.1 Test Standard and Limit

- 9.1.1 Test Standard
FCC Part 15.247 (e)
- 9.1.2 Test Limit

FCC Part 15 Subpart C(15.247)		
Test Item	Limit	Frequency Range(MHz)
Power Spectral Density	8dBm(in any 3 kHz)	2400~2483.5

9.2 Test Setup



9.3 Test Procedure

The EUT was directly connected to the Spectrum Analyzer and antenna output port as show in the block diagram above. The measurement according to section 10.2 of KDB 558074 D01 DTS Meas Guidance v03r05.

- (1) The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram above.
- (2) Set analyser center frequency to DTS channel center frequency.
- (3) Set the span to 1.5 times the DTS bandwidth.
- (4) Set the RBW to: 3 kHz
- (5) Set the VBW to: 10 kHz
- (6) Detector: peak
- (7) Sweep time: auto
- (8) Allow trace to fully stabilize. Then use the peak marker function to determine the maximum amplitude level.

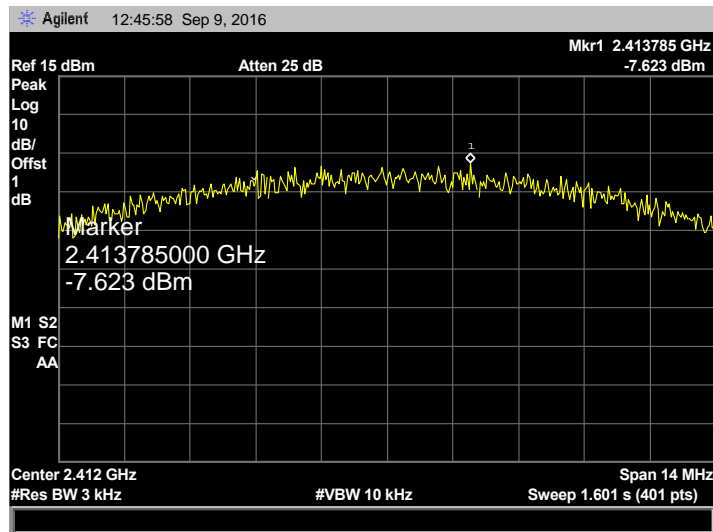
9.4 EUT Operating Condition

The EUT was set to continuously transmitting in each mode and low, middle and high channel for the test.

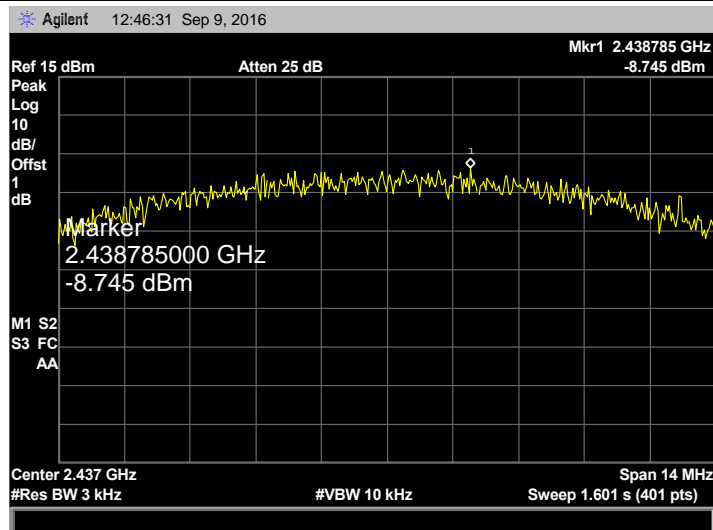
9.5 Test Data

EUT:	ME300RE 1.0	Model Name :		ME300RE 1.0		
Temperature:	25 °C	Relative Humidity:		55%		
Test Voltage:	DC 5V					
Test Mode	Frequency (MHz)	Test Data				Limit (dBm)
		ANT 1 (dBm)	ANT 2 (dBm)	Duty Factor (dB)	Total Power (dBm)	
802.11b	2412	-7.623		0	-7.623	8
	2437	-8.745		0	-8.745	
	2462	-8.526		0	-8.526	
802.11g	2412	-13.43		0	-13.43	
	2437	-13.90		0	-13.90	
	2462	-14.05		0	-14.05	
802.11n (HT20)	2412	-14.56	-16.49	0	-12.41	6.39
	2437	-15.32	-15.82	0	-12.55	
	2462	-15.34	-14.17	0	-11.71	
802.11n (HT40)	2422	-19.80	-20.87	0	-17.29	
	2437	-19.97	-20.27	0	-17.11	
	2462	-19.82	-21.04	0	-17.38	
Result: PASS						
Note: When ANT1 and ANT2 transmitting simultaneously, the total Antenna Gain=Gain 1+Gani 2=7.61 dBi> 6 dBi.						
So P _{out} =P _{limit} -(G _{TX} -6)] =8-1.61=6.39						
Test plots please refer to below pages:						

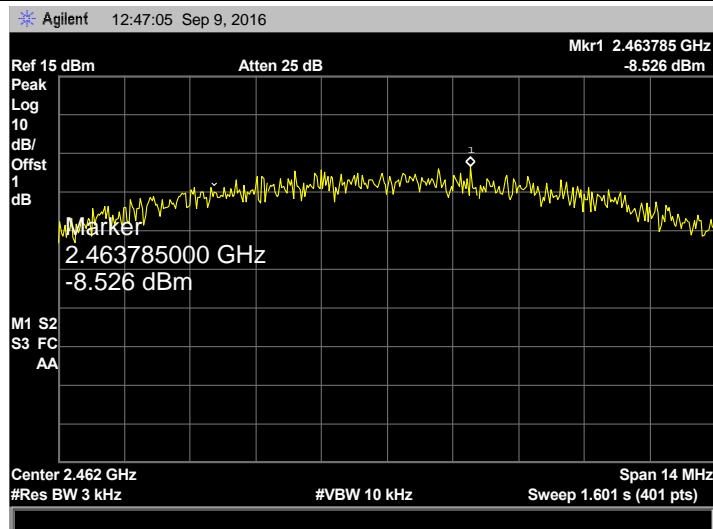
802.11 b 2412 MHz (ANT 1)



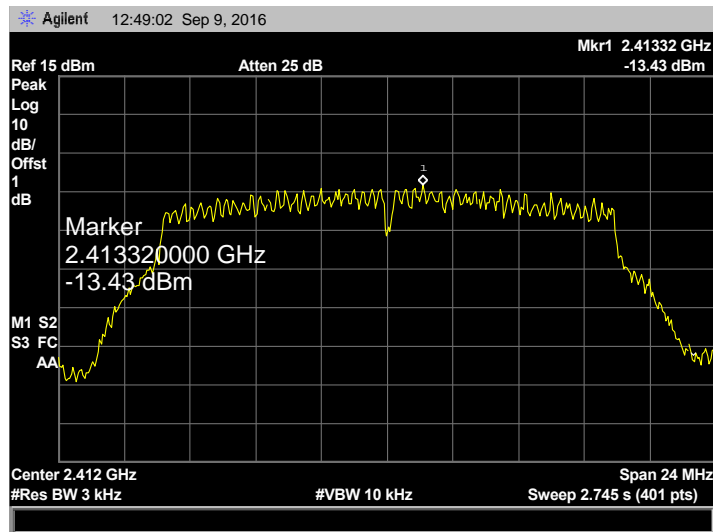
802.11 b 2437 MHz (ANT 1)



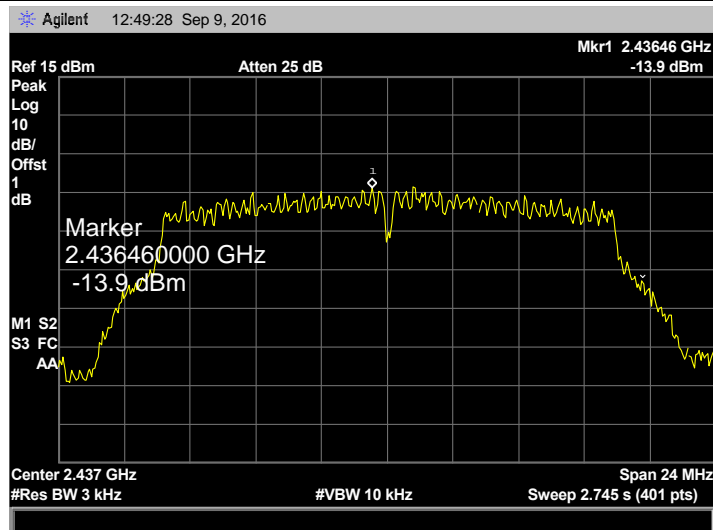
802.11 b 2462MHz (ANT 1)



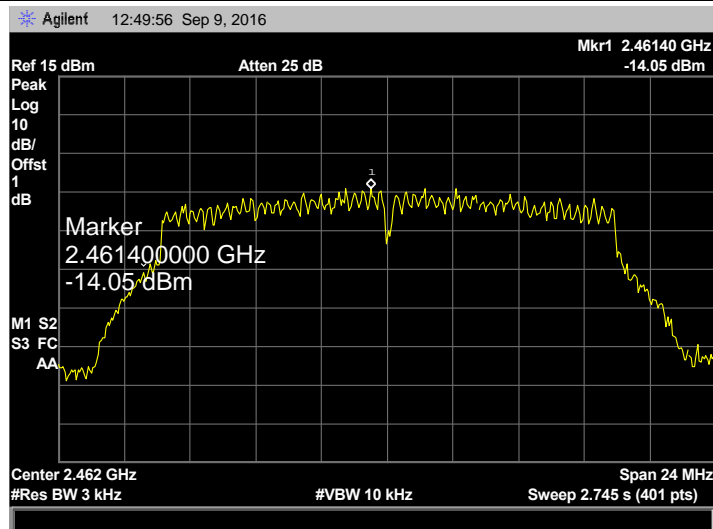
802.11 g 2412 MHz (ANT 1)



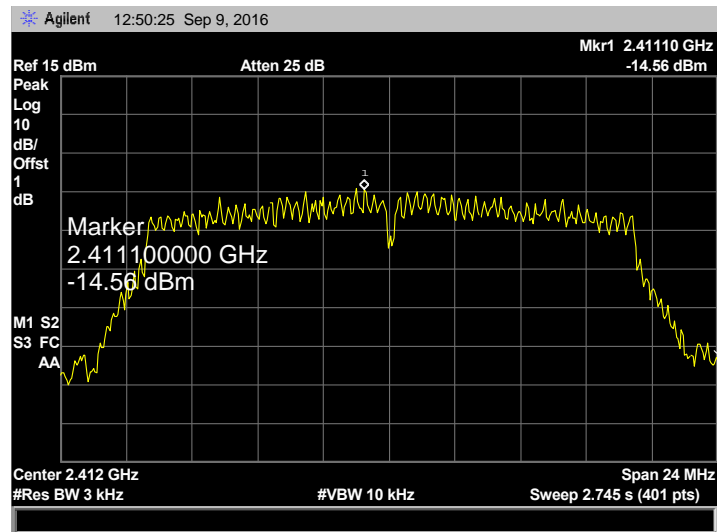
802.11 g 2437 MHz (ANT 1)



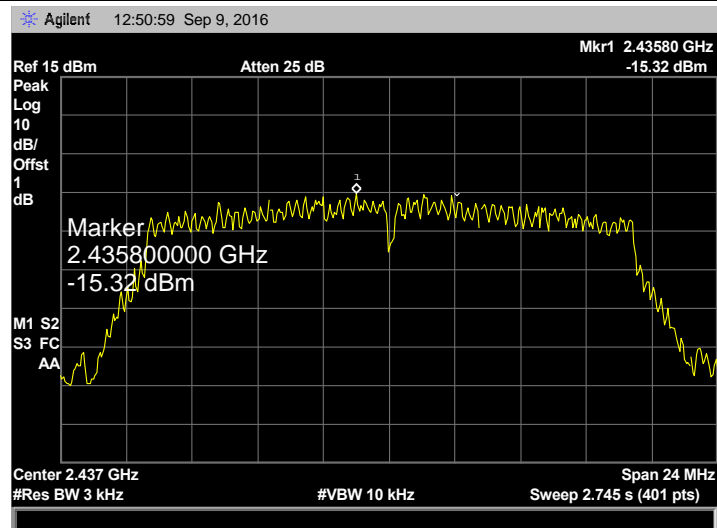
802.11 g 2462MHz (ANT 1)



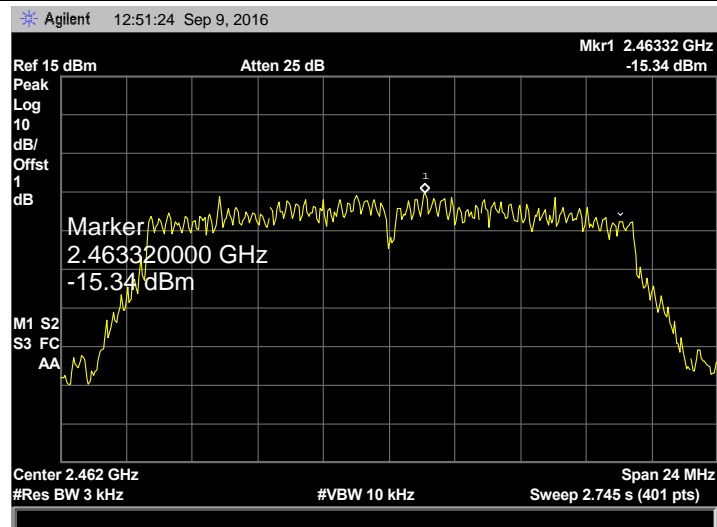
802.11 n(HT20) 2412 MHz (ANT 1)



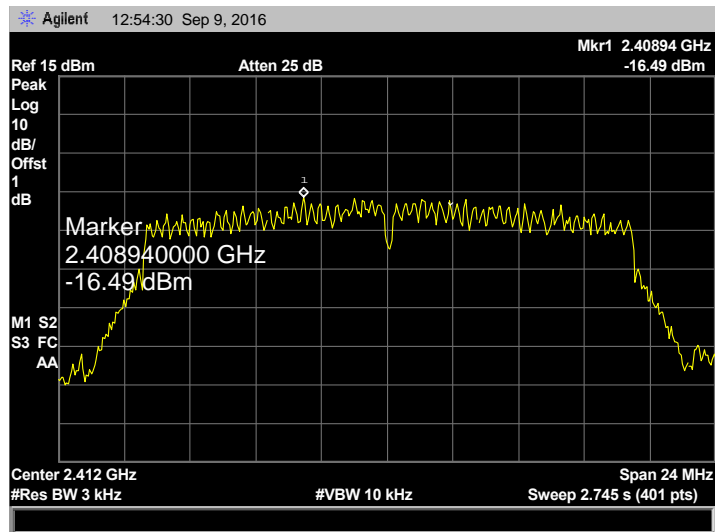
802.11 n(HT20) 2437 MHz (ANT 1)



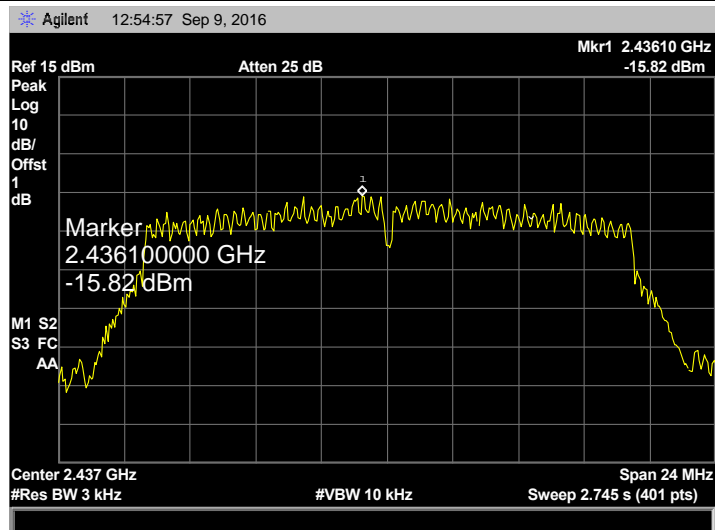
802.11 n(HT20) 2462MHz (ANT 1)



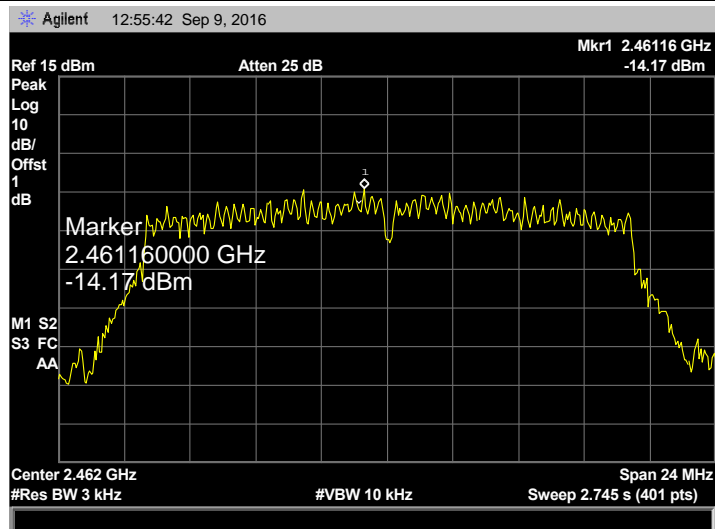
802.11 n(HT20) 2412 MHz (ANT 2)



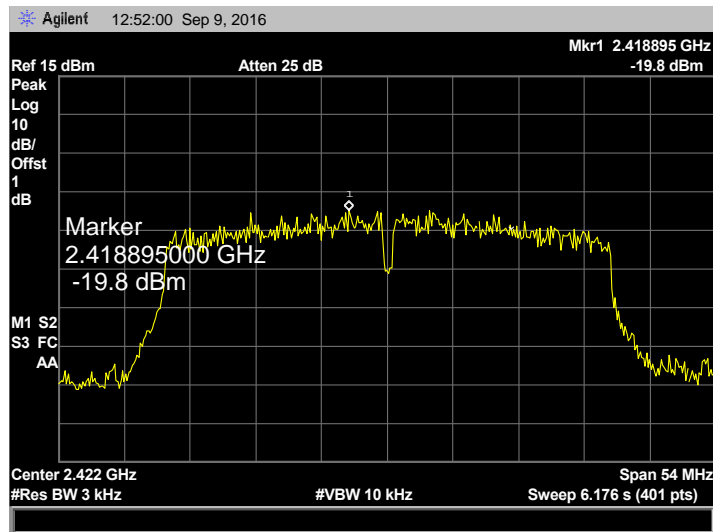
802.11 n(HT20) 2437 MHz (ANT 2)



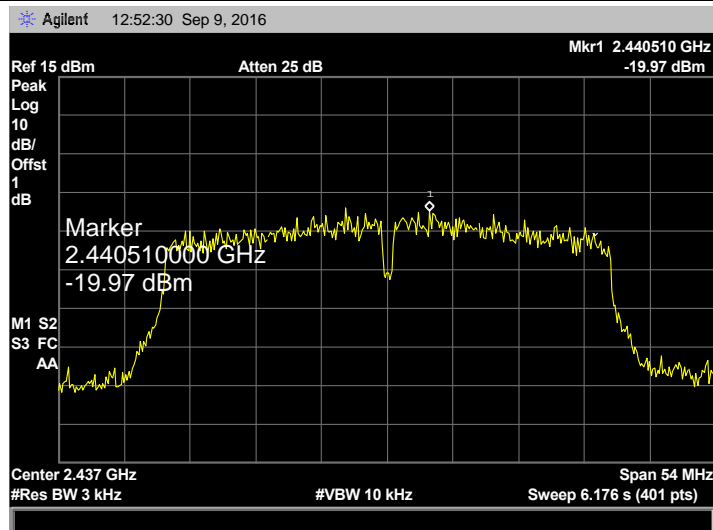
802.11 n(HT20) 2462MHz (ANT 2)



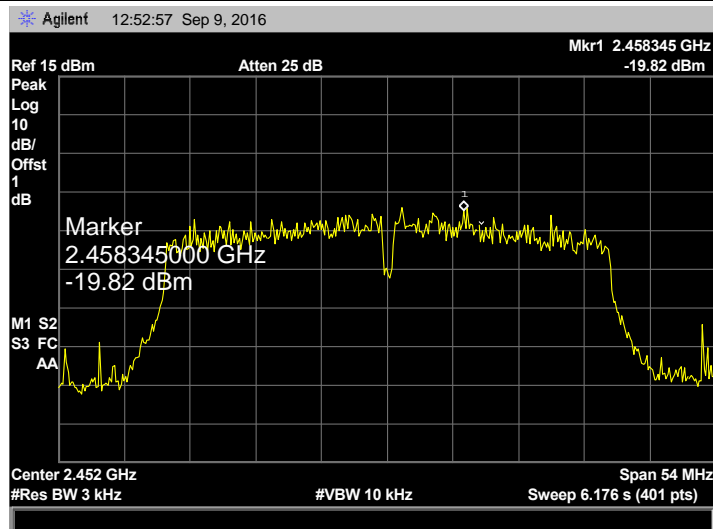
802.11 n(HT40) 2422 MHz (ANT 1)



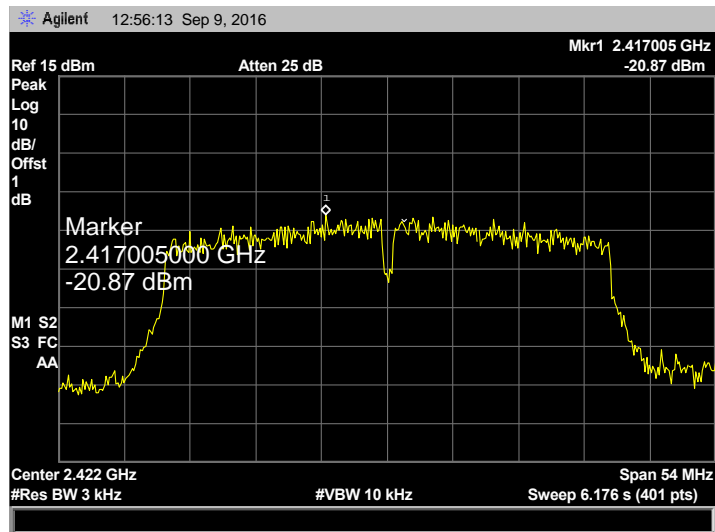
802.11 n(HT40) 2437 MHz (ANT 1)



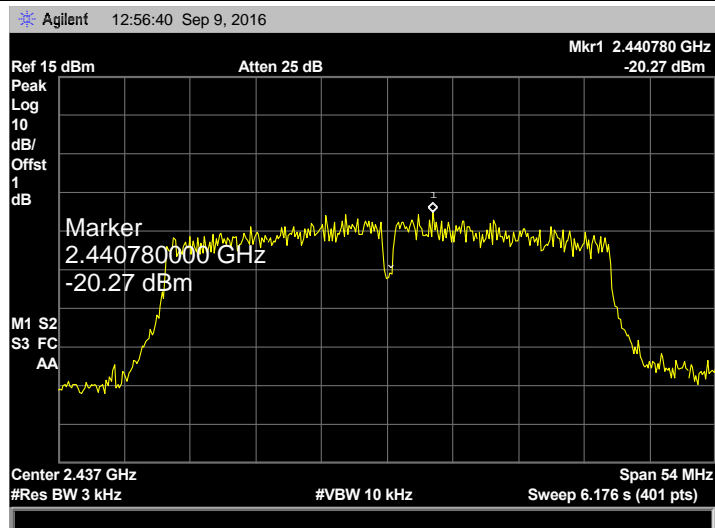
802.11 n(HT40) 2452MHz (ANT 1)



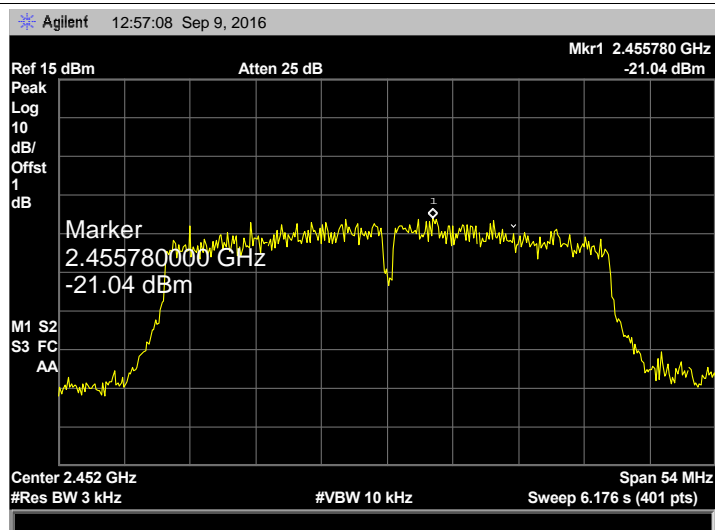
802.11 n(HT40) 2422 MHz (ANT 2)



802.11 n(HT40) 2437 MHz (ANT 2)



802.11 n(HT40) 2452MHz (ANT 2)



10. Antenna Requirement

10.1 Standard Requirement

10.1.1 Standard

FCC Part 15.203

10.1.2 Requirement

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

10.2 Antenna Connected Construction

The directional gains of the antenna used for transmitting is 4.6 dBi, and the antenna de-signed with permanent attachment and no consideration of replacement. Please see the EUT photo for details.

Result

The EUT antenna is a Dipole Antenna. It complies with the standard requirement.

Antenna Type
<input checked="" type="checkbox"/> Permanent attached antenna
<input type="checkbox"/> Unique connector antenna
<input type="checkbox"/> Professional installation antenna