

FCC Part 15C

Measurement And Test Report

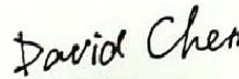
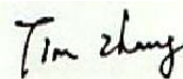
For

QINGDAO WINTEC SYSTEM CO., LTD

NO.3 Building, NO.151, Zhuzhou Road, Laoshan District, Qingdao, China

FCC ID: ZUNIDT800

Aug. 14, 2015

This Report Concerns: ☒ Original Report	Equipment Type: pos terminal
Report Number:	MTI150630001RF-1
Test Engineer:	David Chen 
Reviewed By:	Tim Zhang 
Approved & Authorized By:	Hebe Lee  
Test Date:	Aug. 01, 2015 - Aug. 14, 2015
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1. General Information about EUT

1.1 Client Information

Applicant	:	QINGDAO WINTEC SYSTEM CO., LTD
Address	:	NO.3 Building, NO.151, Zhuzhou Road, Laoshan District, Qingdao, China
Manufacturer	:	QINGDAO WINTEC SYSTEM CO., LTD
Address	:	Wintec Park, Xinye Road, High-Tech Zone, Qingdao, China
Trade	:	WINTEC
EUT Name	:	pos terminal
Model No.	:	IDT800
Serial No.	:	N/A
Model Difference	:	N/A
Standards	:	FCC Part 15, Subpart C (15.247:2014)
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

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	pos terminal
Models No.	:	IDT800
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: 9.18 dBm 802.11g: 9.11 dBm 802.11n (HT20): 9.06dBm 802.11n (HT40): 9.07dBm

	Antenna Gain:	2 dBi (Integral Antenna)
	Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK) 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 power supplied by AC/DC Adapter DC power by Li-ion Battery
Power Rating	:	MODEL: WT1203000 INPUT: 100V-240V~ 50/60Hz 1.6A. Output: 12V $\overline{=}$ 3.0A DC 7.4V 2000mAh Li-ion Battery.
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 v03r02.
- (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		

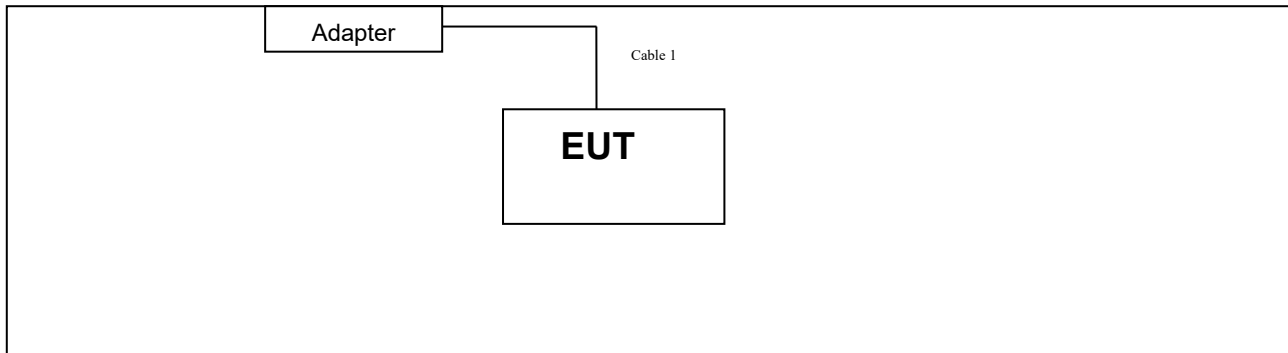
Note: CH 01~CH 11 for 802.11b/g/n(HT20)

CH 03~CH 09 for 802.11n(HT40)

- (4) The Antenna information about the equipment is provided by the applicant.

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 “√”
/	/	/	/	/
Cable Information				
Number	Shielded Type	Ferrite Core	Length	Note
Cable 1	YES	YES	0.8M	

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	AC Charging with 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 5	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 Version	AccessPort		
Channel	CH 01	CH 06	CH 11
IEEE 802.11b DSSS	28	26	24
IEEE 802.11g OFDM	34	33	32
IEEE 802.11n (HT20)	33	33	32
	CH 03	CH 06	CH 09
IEEE 802.11n (HT40)	35	35	33

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	± 3.42 dB
	150kHz to 30MHz	± 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

Shenzhen Toby Technology Co., Ltd.

Add.: 1 A/F., Bldg.6, Yusheng Industrial Zone The National Road No.107 Xixiang Section
467, Nanshan District, Shenzhen, Guangdong China

FCC Registration No.:811562

2. Test Summary

FCC Part 15 Subpart C(15.247)			
Standard Section	Test Item	Judgment	Remark
FCC			
15.203	Antenna Requirement	PASS	N/A
15.207	Conducted Emission	PASS	N/A
15.205	Restricted Bands	PASS	N/A
15.247(a)(2)	6dB Bandwidth	PASS	N/A
15.247(b)	Peak Output Power	PASS	N/A
15.247(e)	Power Spectral Density	PASS	N/A
15.247(d)	Transmitter Radiated Spurious Emission	PASS	N/A
15.247(d)	Antenna Conducted Spurious Emission	PASS	N/A
Note: "/" for no requirement for this test item. N/A is an abbreviation for Not Applicable.			

3. Test Equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
EMI Test Receiver	ROHDE& SCHWARZ	ESCI	100321	Aug. 02, 2015	Aug.01, 2016
50ΩCoaxial Switch	Anritsu	MP59B	X10321	Aug. 02, 2015	Aug.01, 2016
L.I.S.N	Rohde & Schwarz	ENV216	101131	Aug. 02, 2015	Aug.01, 2016
L.I.S.N	SCHWARZBECK	NNBL 8226-2	8226-2/164	Aug. 02, 2015	Aug.01, 2016
Spectrum Analyzer	Agilent	E4407B	MY45106456	Aug. 02, 2015	Aug.01, 2016
Spectrum Analyzer	Rohde & Schwarz	FSP30	DE25181	Aug. 02, 2015	Aug.01, 2016
EMI Test Receiver	Rohde & Schwarz	ESCI	101165	Aug. 02, 2015	Aug.01, 2016
Bilog Antenna	ETS-LINDGREN	3142E	00117537	Mar. 06, 2015	Mar.05, 2016
Horn Antenna	ETS-LINDGREN	3117	00143207	Mar. 06, 2015	Mar.05, 2016
Horn Antenna	Schwarzbeck	BBHA 9170	373	Mar. 06, 2015	Mar.05, 2016
Pre-amplifier	HP	11909A	185903	Mar. 06, 2015	Mar.05, 2016
Pre-amplifier	HP	8447B	3008A00849	Mar. 06, 2015	Mar.05, 2016
Power meter	Anritsu	ML2495A	1005002	Dec. 11, 2014	Dec. 10, 2014
Power Sensor	Anritsu	MA2411B	0917070	Dec. 11, 2014	Dec. 10, 2014
Cable	HUBER+SUHNER	100	SUCOFLEX	Mar. 06, 2015	Mar.05, 2016

4. Conducted Emission Test

4.1 Test Standard and Limit

4.1.1 Test Standard

FCC Part 15.207

4.1.2 Test Limit

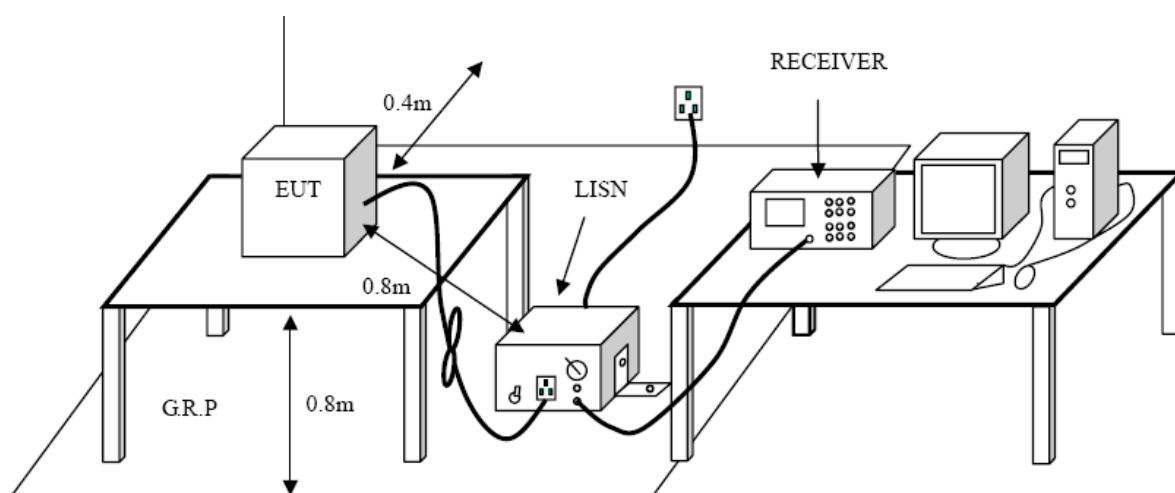
Conducted Emission Test Limit

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.

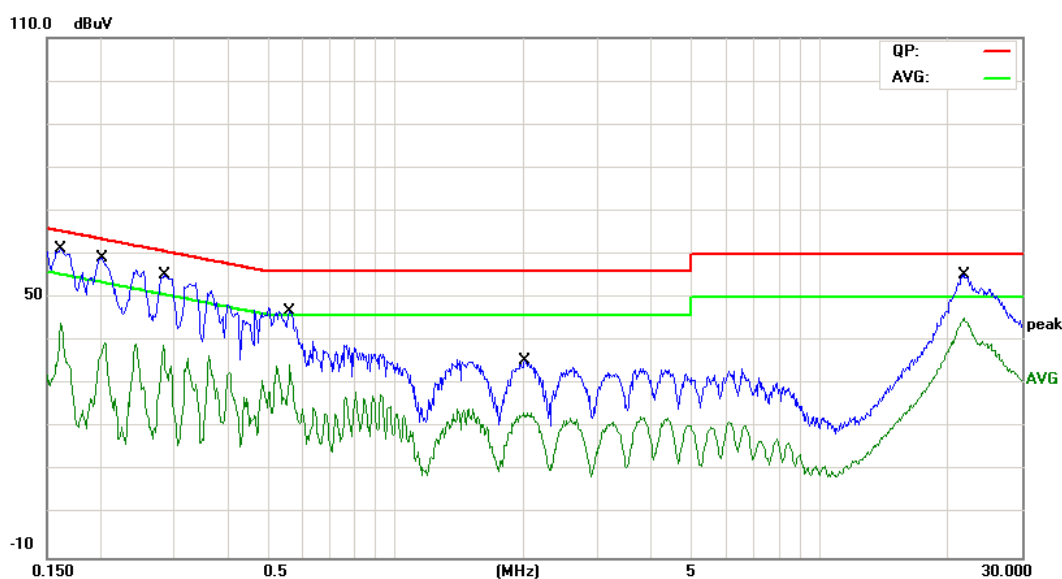
4.4 EUT Operating Mode

Please refer to the description of test mode.

4.5 Test Data

Please see the next page.

EUT:	Pos terminal	Model Name :	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Terminal:	Line		
Test Mode:	AC Charging with TX B Mode		
Remark:	Only worse case is reported		

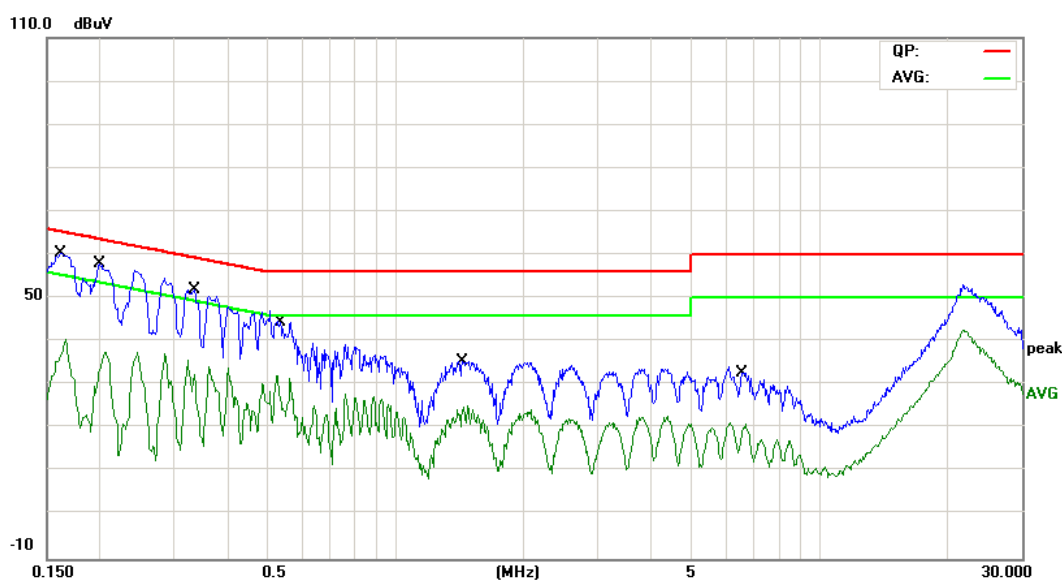


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1620	51.14	10.12	61.26	65.36	-4.10	QP	
2		0.1620	34.08	10.12	44.20	55.36	-11.16	AVG	
3		0.2020	49.16	10.12	59.28	63.52	-4.24	QP	
4		0.2020	29.61	10.12	39.73	53.52	-13.79	AVG	
5		0.2832	45.09	10.09	55.18	60.72	-5.54	QP	
6		0.2832	28.82	10.09	38.91	50.72	-11.81	AVG	
7		0.5620	36.87	10.02	46.89	56.00	-9.11	QP	
8		0.5620	24.57	10.02	34.59	46.00	-11.41	AVG	
9		2.0140	25.40	10.06	35.46	56.00	-20.54	QP	
10		2.0140	13.49	10.06	23.55	46.00	-22.45	AVG	
11		22.0300	45.15	10.06	55.21	60.00	-4.79	QP	
12		22.0300	35.14	10.06	45.20	50.00	-4.80	AVG	

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

Emission Level= Read Level+ Correct Factor

EUT:	Pos terminal	Model Name :	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Terminal:	Neutral		
Test Mode:	AC Charging with TX B Mode		
Remark:	Only worse case is reported		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1620	50.43	9.94	60.37	65.36	-4.99	QP	
2		0.1620	30.48	9.94	40.42	55.36	-14.94	AVG	
3		0.1995	47.90	10.02	57.92	63.63	-5.71	QP	
4		0.1995	27.59	10.02	37.61	53.63	-16.02	AVG	
5		0.3339	41.96	10.02	51.98	59.35	-7.37	QP	
6		0.3339	25.59	10.02	35.61	49.35	-13.74	AVG	
7		0.5340	34.34	10.04	44.38	56.00	-11.62	QP	
8		0.5340	22.19	10.04	32.23	46.00	-13.77	AVG	
9		1.4380	25.44	10.06	35.50	56.00	-20.50	QP	
10		1.4380	15.06	10.06	25.12	46.00	-20.88	AVG	
11		6.5539	22.85	10.04	32.89	60.00	-27.11	QP	
12		6.5539	11.32	10.04	21.36	50.00	-28.64	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

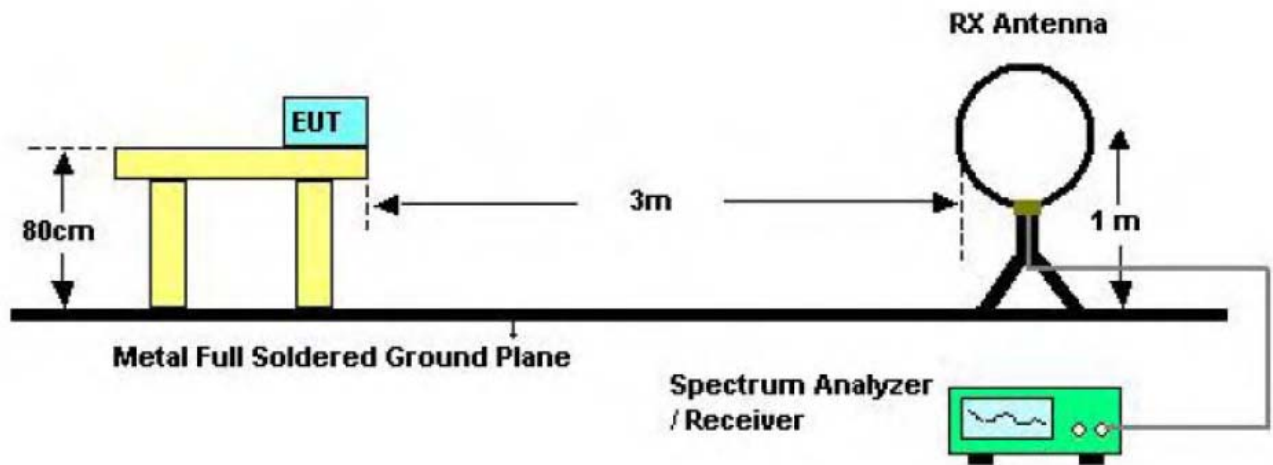
Radiated Emission Limit (Above 1000MHz)

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

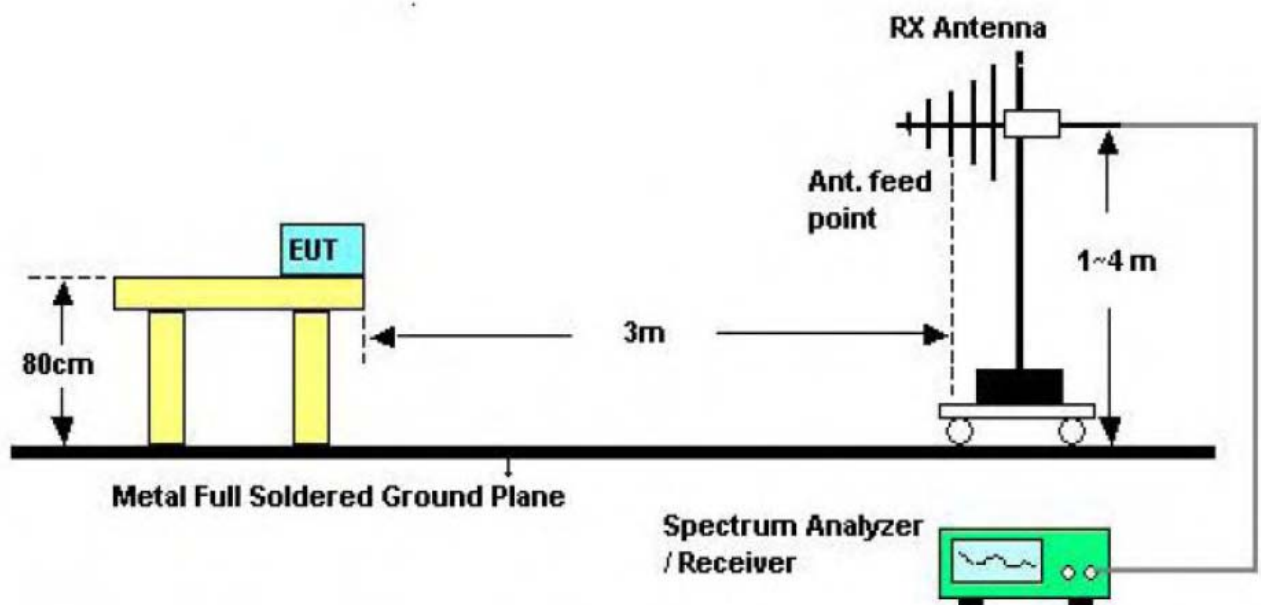
Note:

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

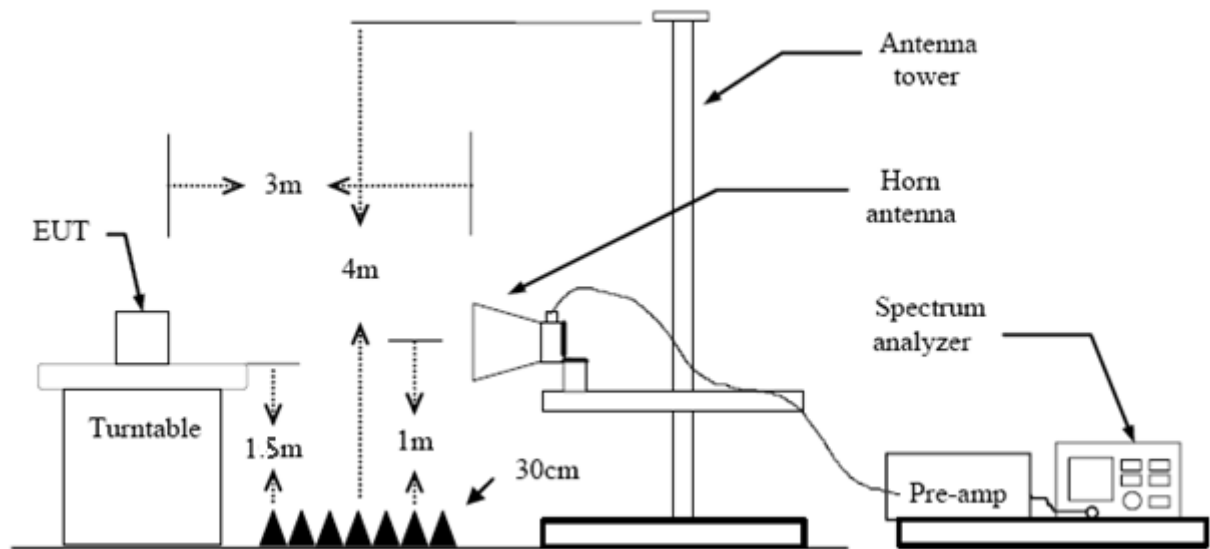
5.2 Test Setup



Below 30MHz Test Setup



Below 1000MHz Test Setup



Above 1GHz Test Setup

5.3 Test Procedure

- (1) 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.

5.4 EUT Operating Condition

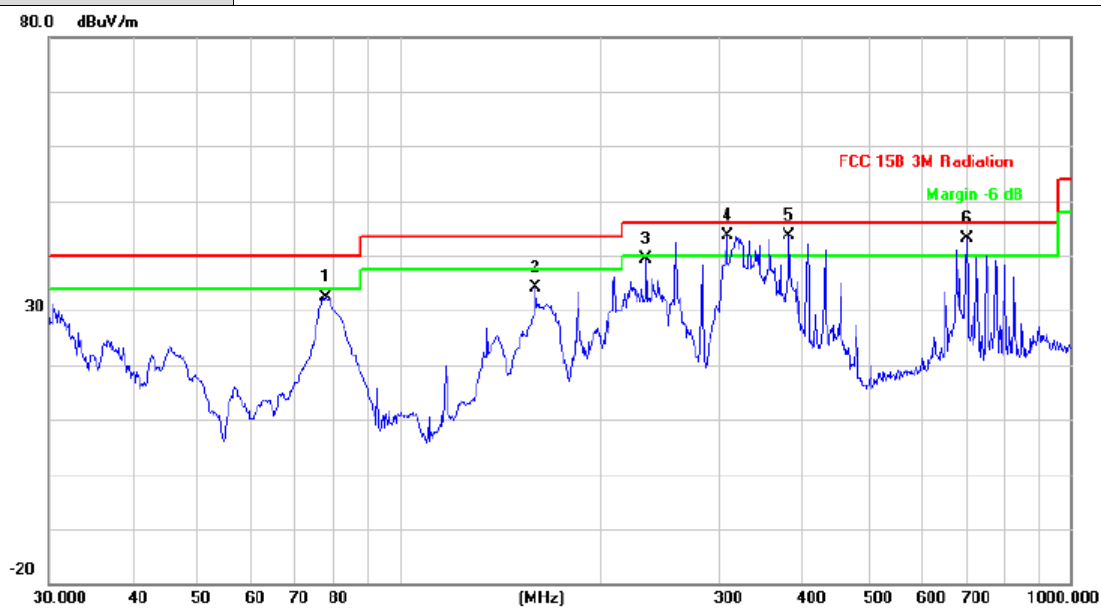
The Equipment Under Test was set to Continual Transmitting in maximum power.

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:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz		
Remark:	Only worse case is reported		

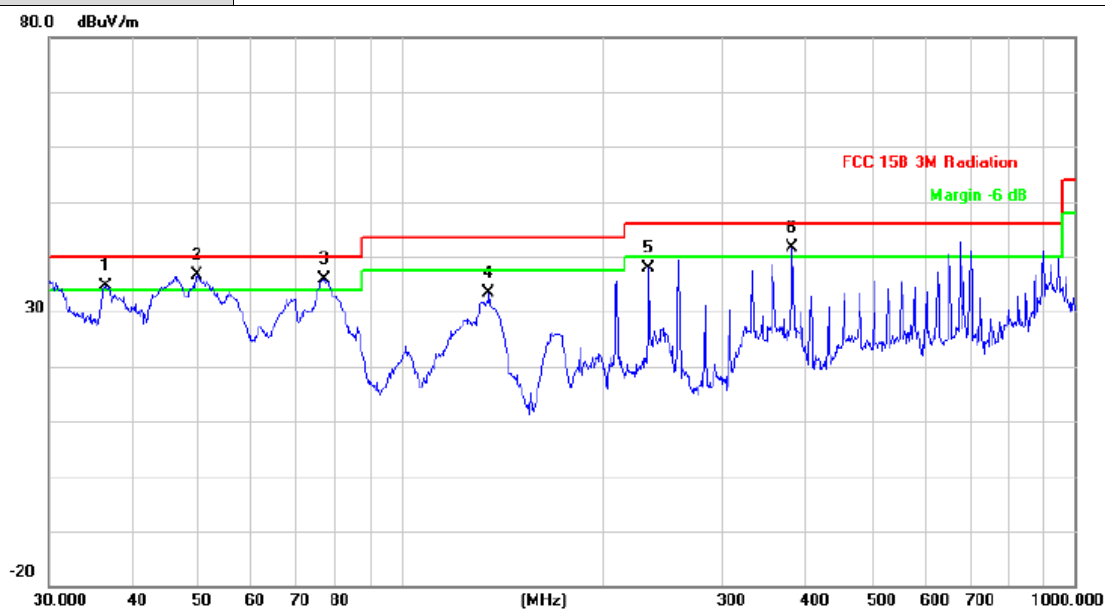


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1		77.5927	55.65	-23.36	32.29	40.00	-7.71	peak			
2		159.7844	54.76	-20.52	34.24	43.50	-9.26	peak			
3		233.3487	58.24	-18.91	39.33	46.00	-6.67	peak			
4	*	307.8312	60.45	-16.79	43.66	46.00	-2.34	peak			
5	!	381.2485	57.70	-14.05	43.65	46.00	-2.35	peak			
6	!	701.7609	49.99	-6.88	43.11	46.00	-2.89	peak			

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

Emission Level= Read Level+ Correct Factor

EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz		
Remark:	Only worse case is reported		

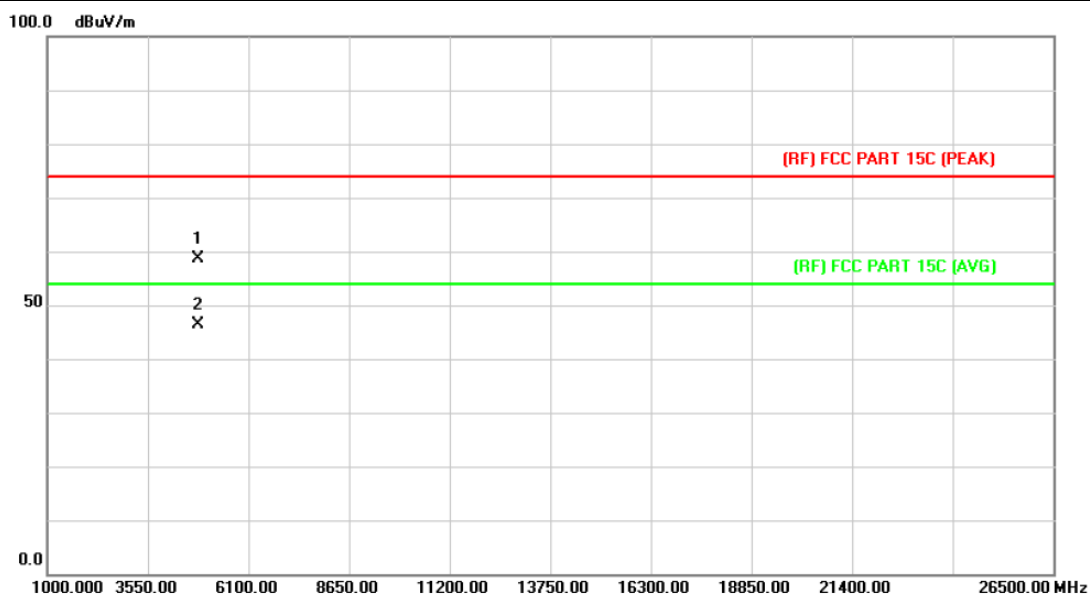


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	Antenna Height cm	Table Degree degree	Comment
1	!	36.3813	52.54	-17.91	34.63	40.00	-5.37	peak			
2	*	49.7068	60.82	-24.27	36.55	40.00	-3.45	peak			
3	!	77.0504	59.20	-23.38	35.82	40.00	-4.18	peak			
4		135.0319	55.46	-22.08	33.38	43.50	-10.12	peak			
5		233.3487	56.86	-18.91	37.95	46.00	-8.05	peak			
6	!	381.2485	55.68	-14.05	41.63	46.00	-4.37	peak			

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

Emission Level= Read Level+ Correct Factor

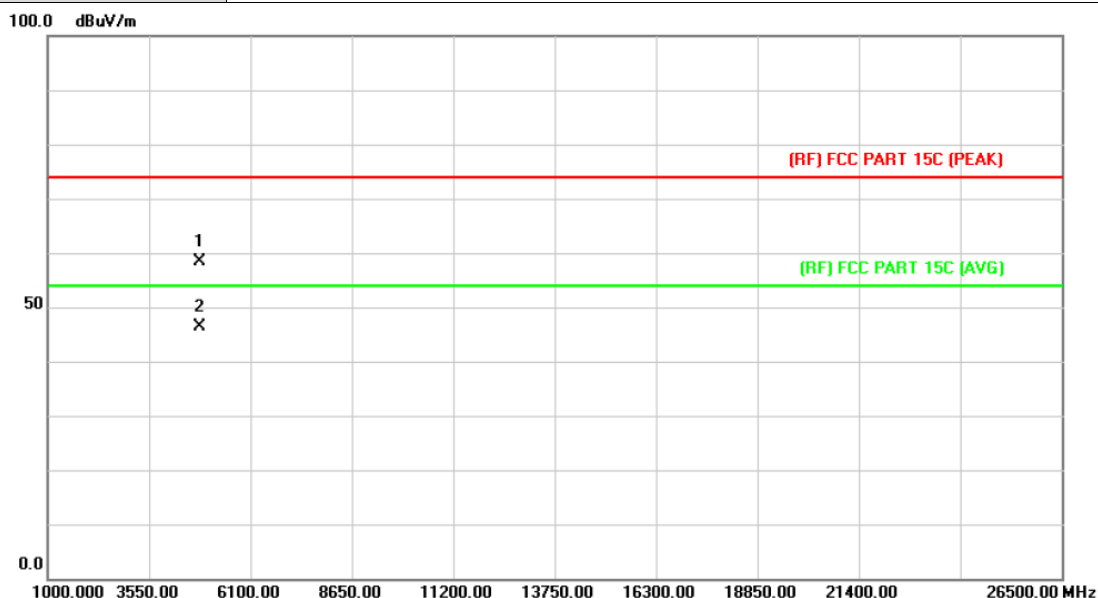
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4823.844	44.99	13.56	58.55	74.00	-15.45	peak
2	*	4823.922	32.86	13.56	46.42	54.00	-7.58	AVG

Emission Level= Read Level+ Correct Factor

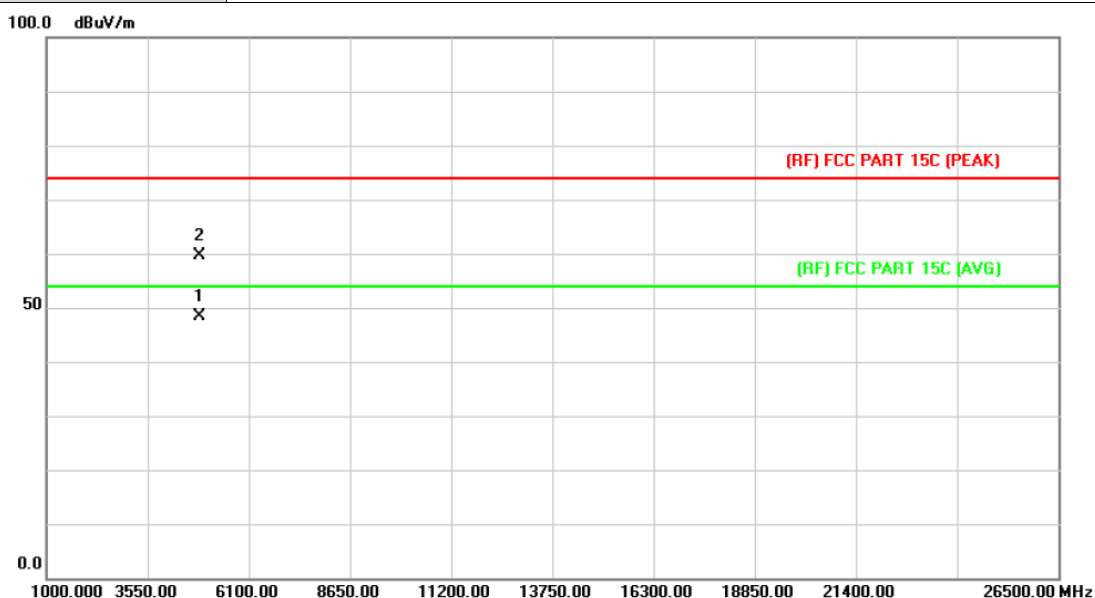
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4823.997	44.78	13.56	58.34	74.00	-15.66	peak
2	*	4824.048	32.79	13.56	46.35	54.00	-7.65	AVG

Emission Level= Read Level+ Correct Factor

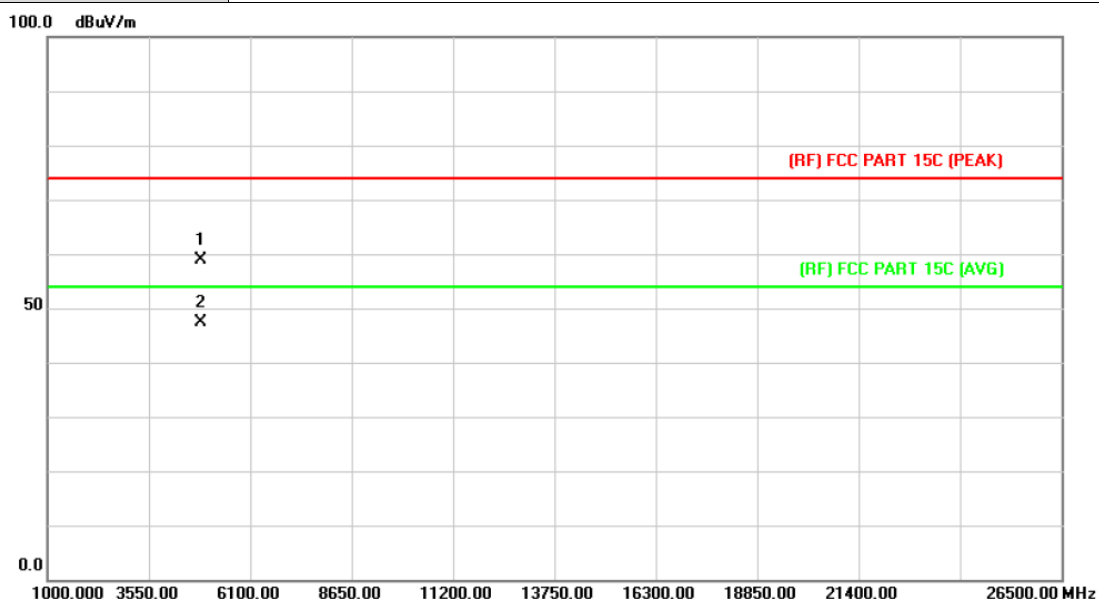
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2437MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4873.931	34.60	13.86	48.46	54.00	-5.54	AVG
2		4874.384	45.84	13.86	59.70	74.00	-14.30	peak

Emission Level= Read Level+ Correct Factor

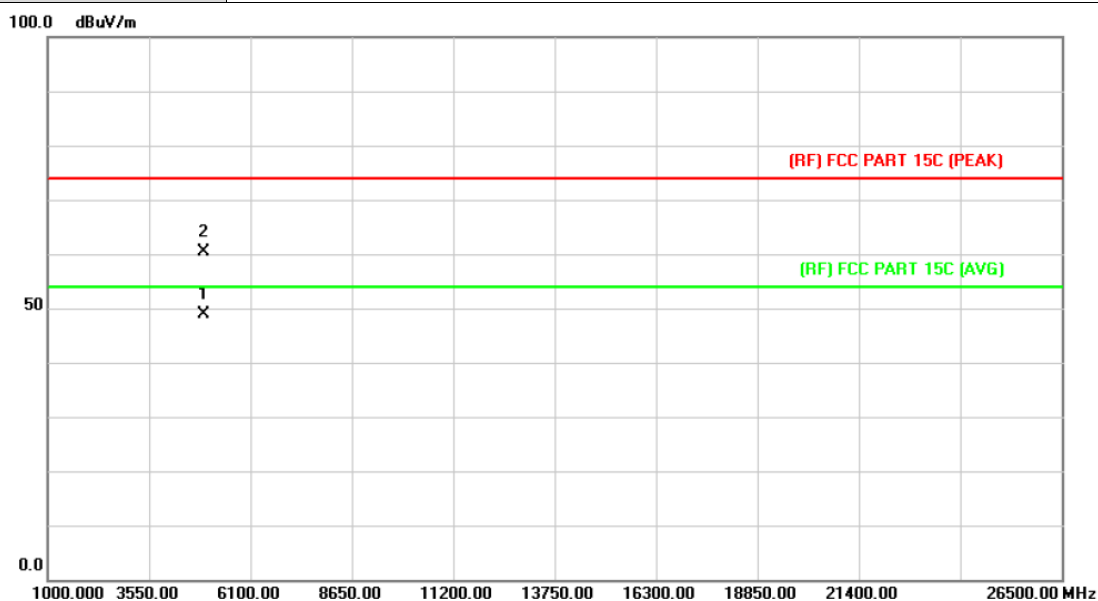
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2437MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4873.700	44.95	13.86	58.81	74.00	-15.19	peak
2	*	4873.949	33.56	13.86	47.42	54.00	-6.58	AVG

Emission Level= Read Level+ Correct Factor

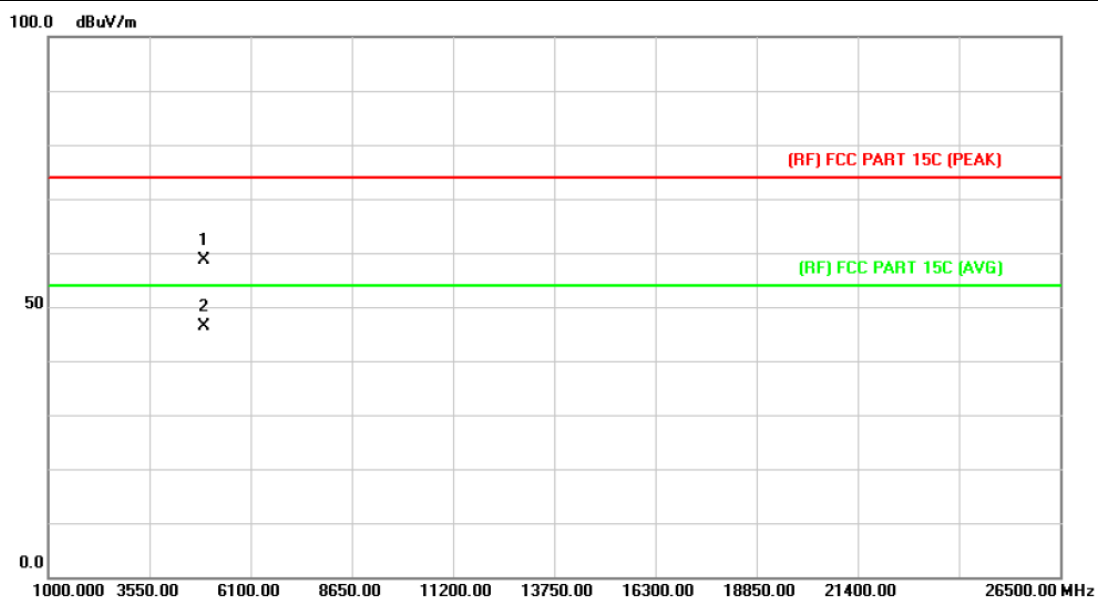
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2462MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4923.970	34.67	14.15	48.82	54.00	-5.18	AVG
2		4924.057	46.12	14.15	60.27	74.00	-13.73	peak

Emission Level= Read Level+ Correct Factor

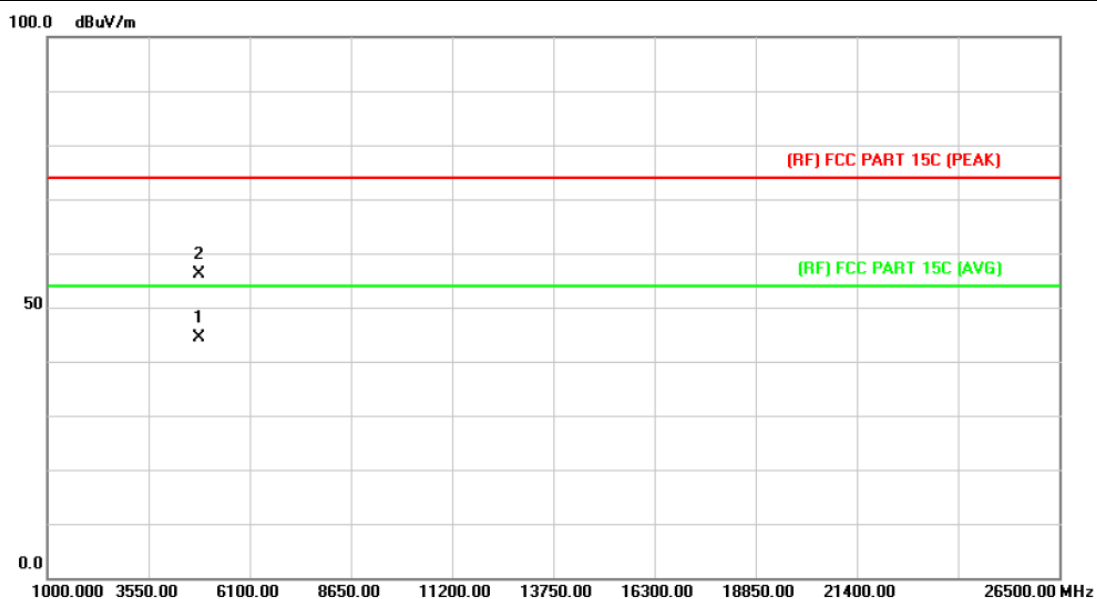
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2462MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4923.877	44.36	14.15	58.51	74.00	-15.49	peak
2	*	4923.970	32.21	14.15	46.36	54.00	-7.64	AVG

Emission Level= Read Level+ Correct Factor

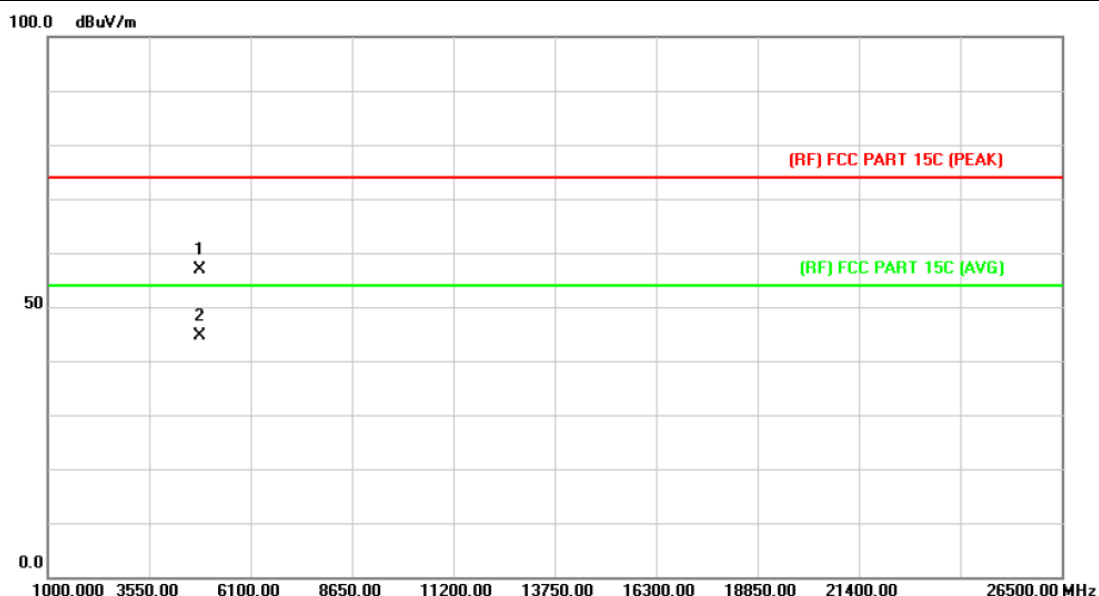
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2412MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4823.287	30.78	13.56	44.34	54.00	-9.66	AVG
2		4823.735	42.64	13.56	56.20	74.00	-17.80	peak

Emission Level= Read Level+ Correct Factor

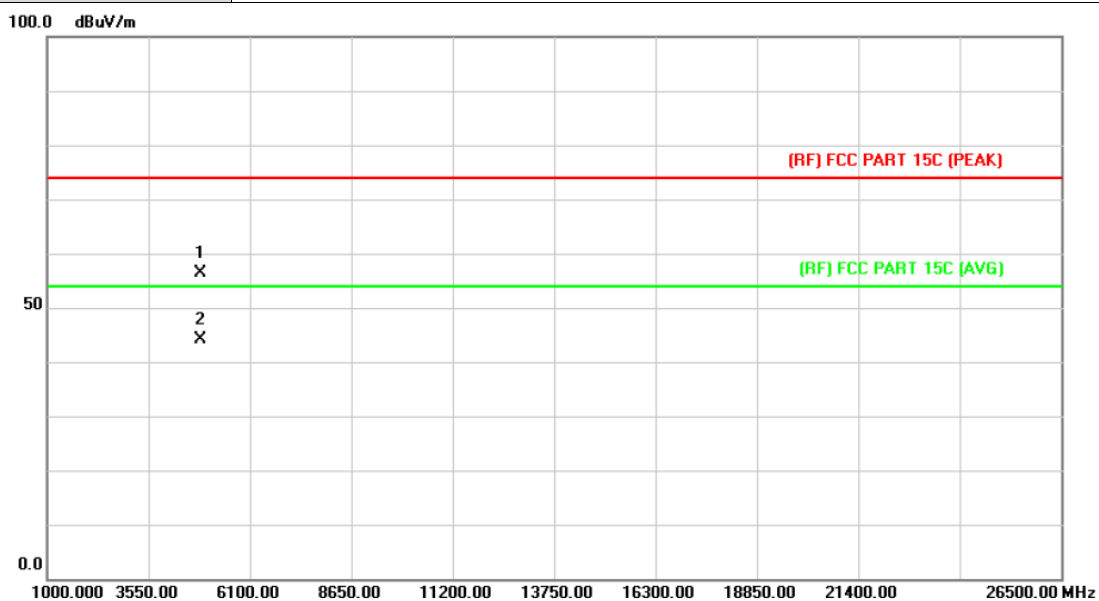
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2412MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4823.657	43.33	13.56	56.89	74.00	-17.11	peak
2	*	4823.657	31.09	13.56	44.65	54.00	-9.35	AVG

Emission Level= Read Level+ Correct Factor

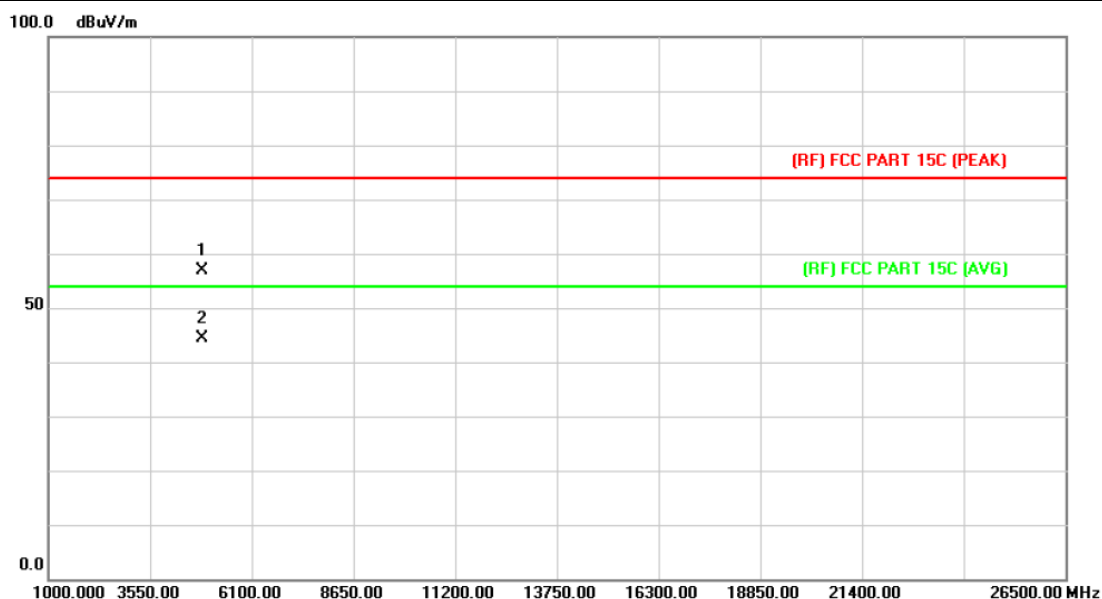
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2437MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4873.257	42.45	13.86	56.31	74.00	-17.69	peak
2	*	4873.951	30.29	13.86	44.15	54.00	-9.85	AVG

Emission Level= Read Level+ Correct Factor

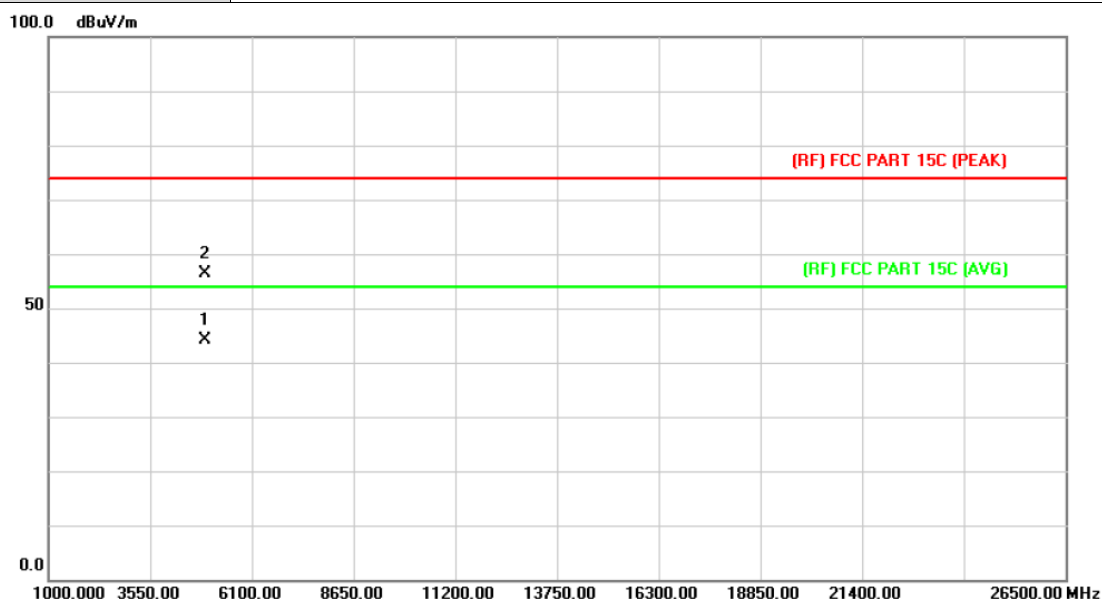
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2437MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4873.542	42.91	13.86	56.77	74.00	-17.23	peak
2	*	4873.921	30.43	13.86	44.29	54.00	-9.71	AVG

Emission Level= Read Level+ Correct Factor

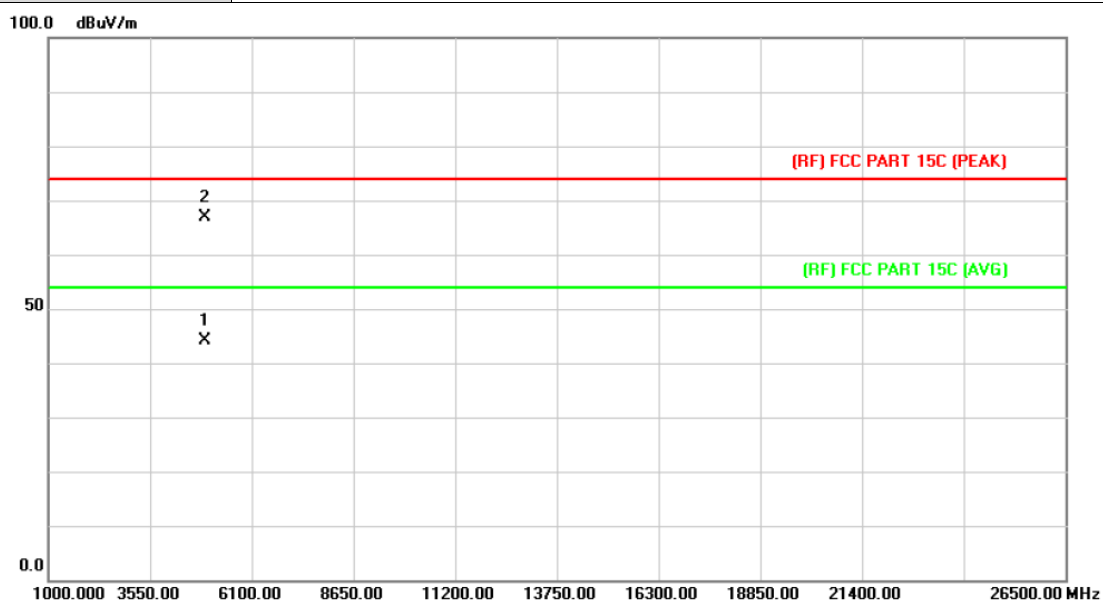
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2462MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4923.540	30.09	14.15	44.24	54.00	-9.76	AVG
2		4923.870	42.22	14.15	56.37	74.00	-17.63	peak

Emission Level= Read Level+ Correct Factor

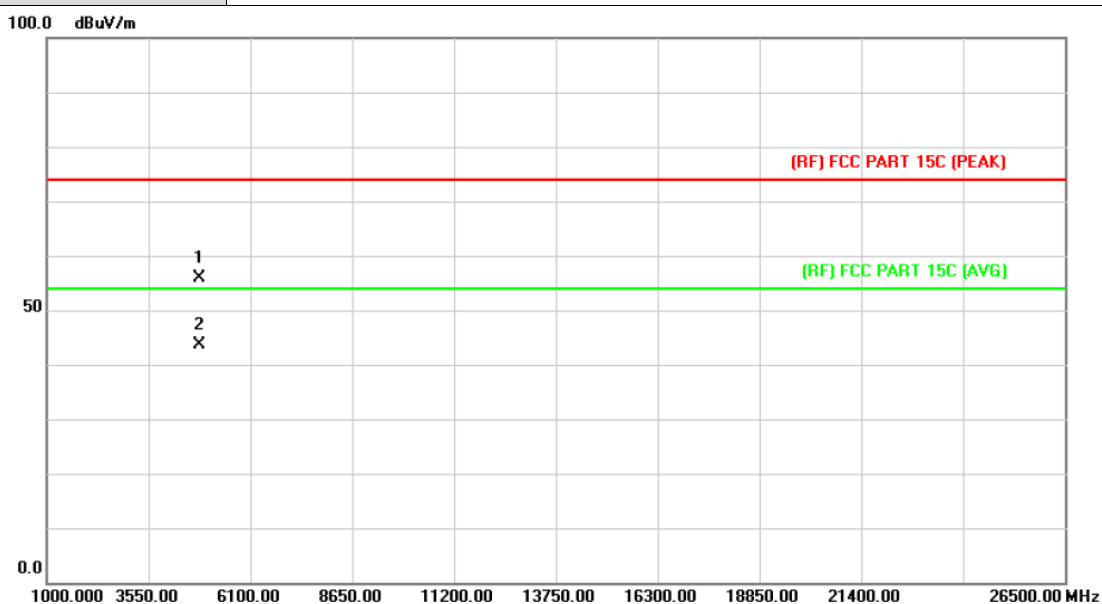
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2462MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4923.120	30.09	14.15	44.24	54.00	-9.76	AVG
2	*	4923.630	52.82	14.15	66.97	74.00	-7.03	peak

Emission Level= Read Level+ Correct Factor

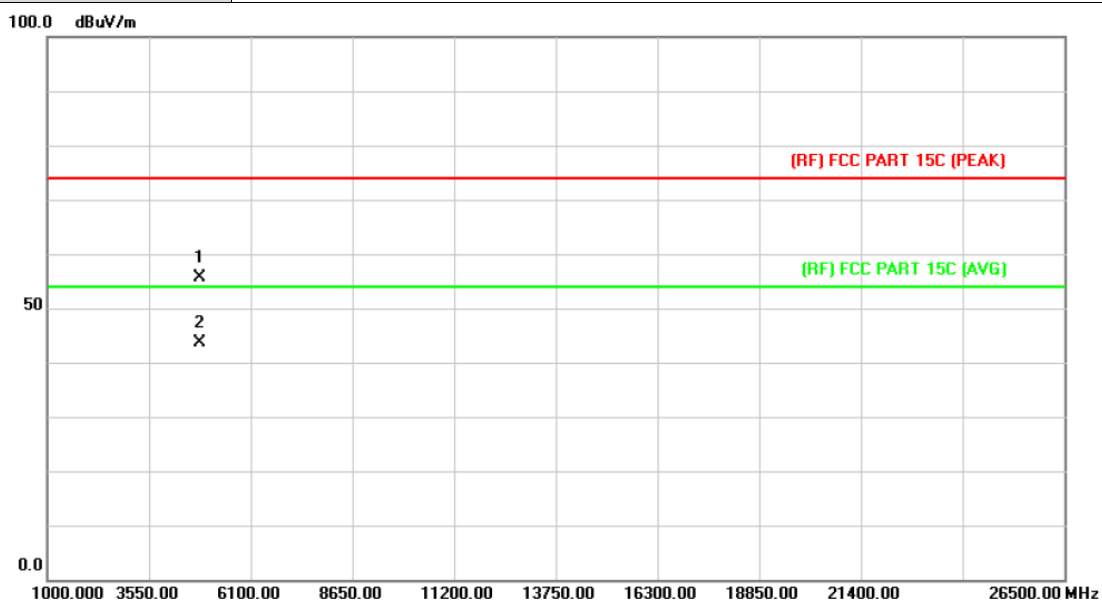
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2412MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4823.180	42.26	13.56	55.82	74.00	-18.18	peak
2	*	4823.270	30.08	13.56	43.64	54.00	-10.36	AVG

Emission Level= Read Level+ Correct Factor

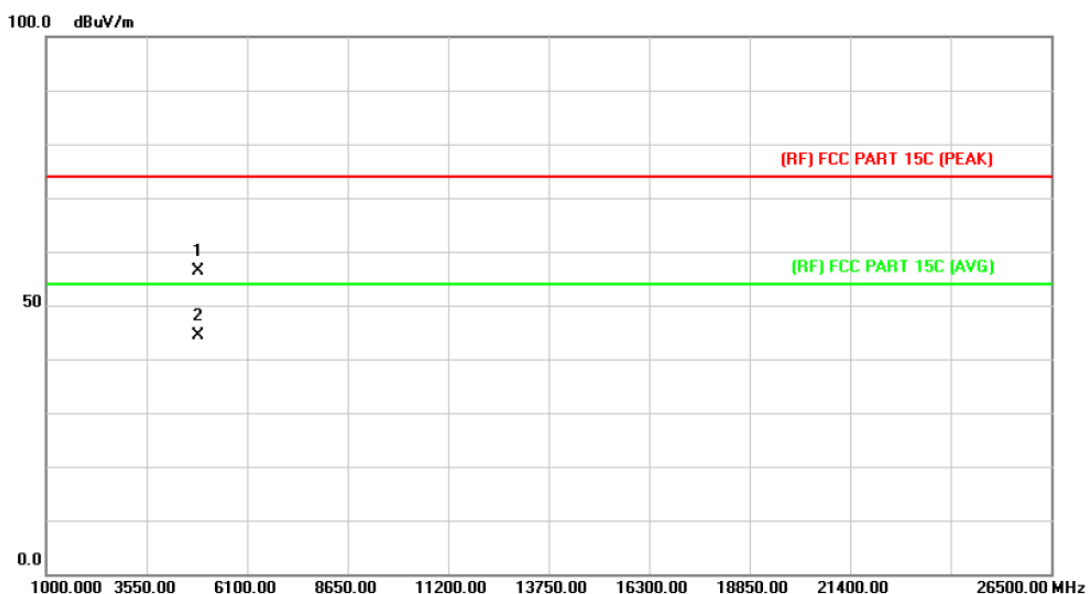
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2412MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4823.390	42.16	13.56	55.72	74.00	-18.28	peak
2	*	4823.480	29.96	13.56	43.52	54.00	-10.48	AVG

Emission Level= Read Level+ Correct Factor

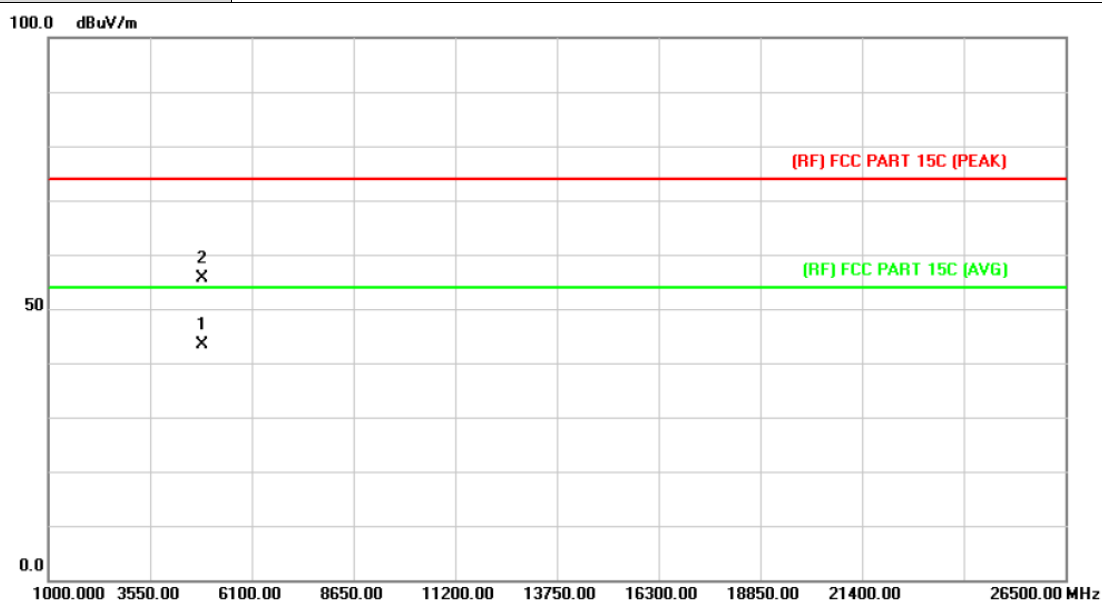
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2437MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4874.346	42.52	13.86	56.38	74.00	-17.62	peak
2	*	4874.807	30.61	13.86	44.47	54.00	-9.53	AVG

Emission Level= Read Level+ Correct Factor

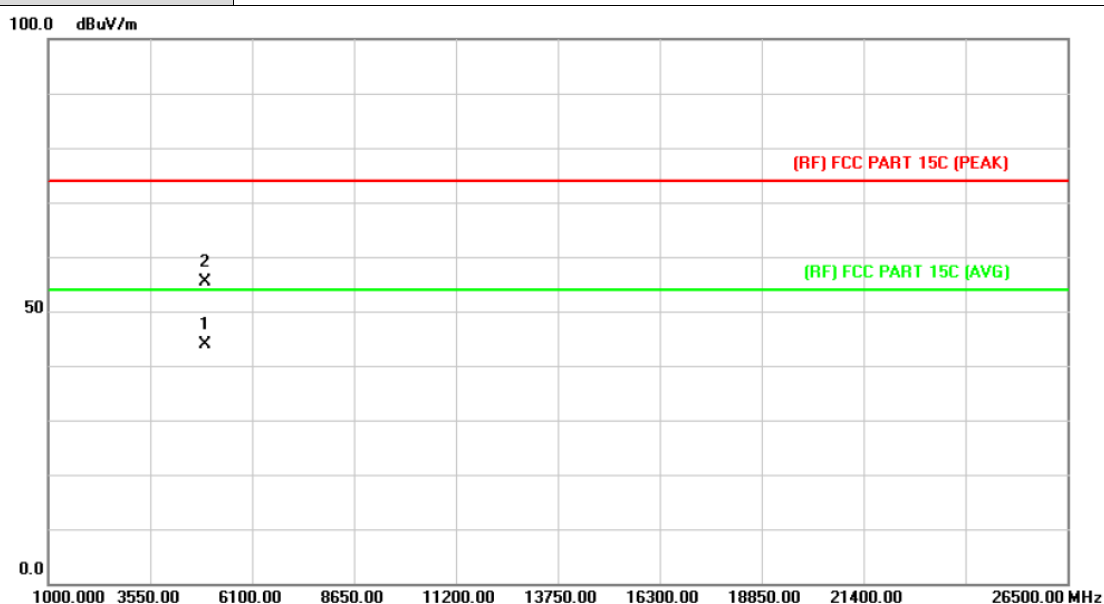
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2437MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4874.259	29.45	13.86	43.31	54.00	-10.69	AVG
2		4874.697	41.88	13.86	55.74	74.00	-18.26	peak

Emission Level= Read Level+ Correct Factor

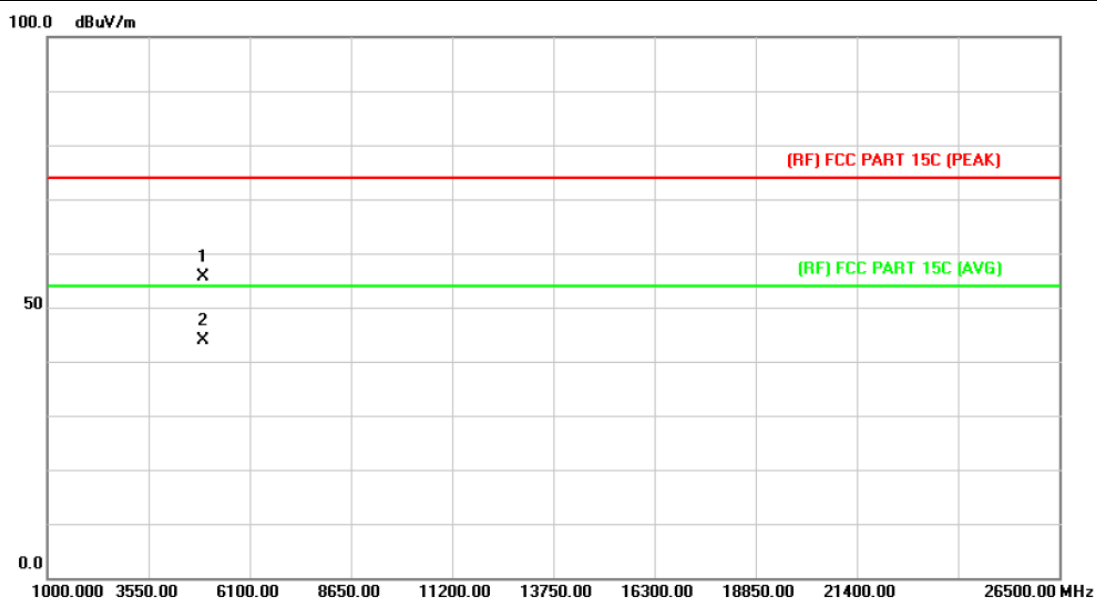
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2462MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4923.412	29.63	14.15	43.78	54.00	-10.22	AVG
2		4923.663	41.20	14.15	55.35	74.00	-18.65	peak

Emission Level= Read Level+ Correct Factor

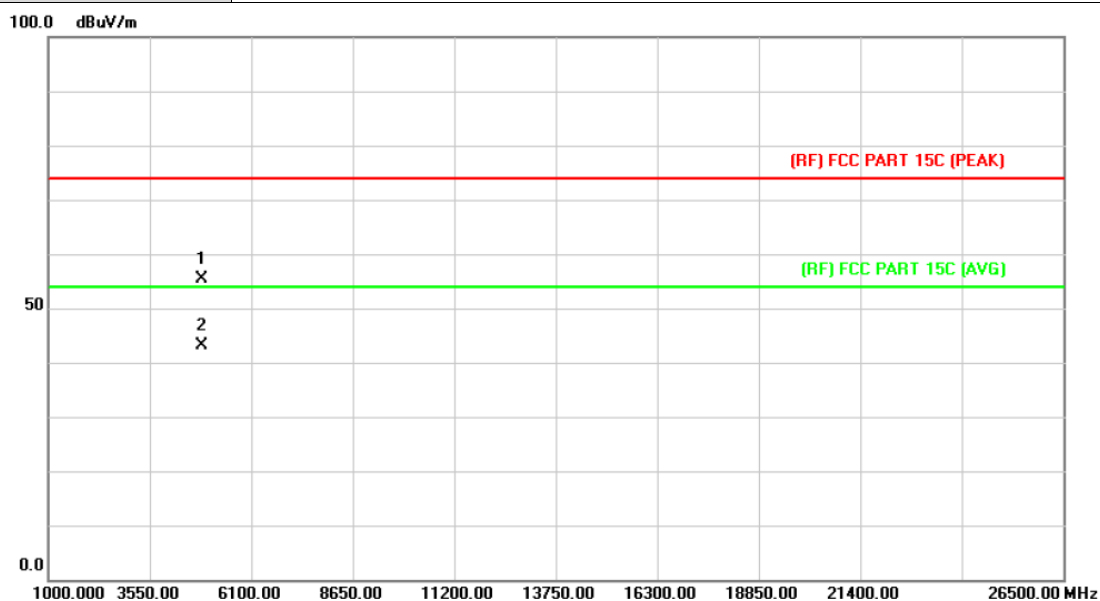
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2462MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		4923.660	41.57	14.15	55.72	74.00	-18.28	peak
2	*	4923.750	29.66	14.15	43.81	54.00	-10.19	AVG

Emission Level= Read Level+ Correct Factor

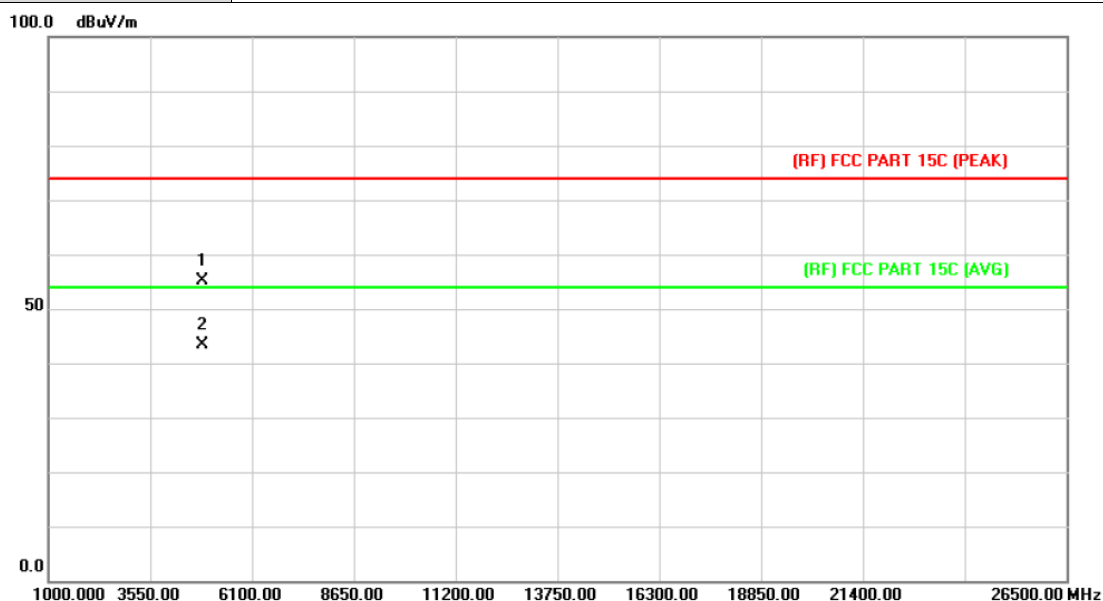
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2422MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4843.790	41.77	13.68	55.45	74.00	-18.55	peak
2	*	4843.960	29.54	13.68	43.22	54.00	-10.78	AVG

Emission Level= Read Level+ Correct Factor

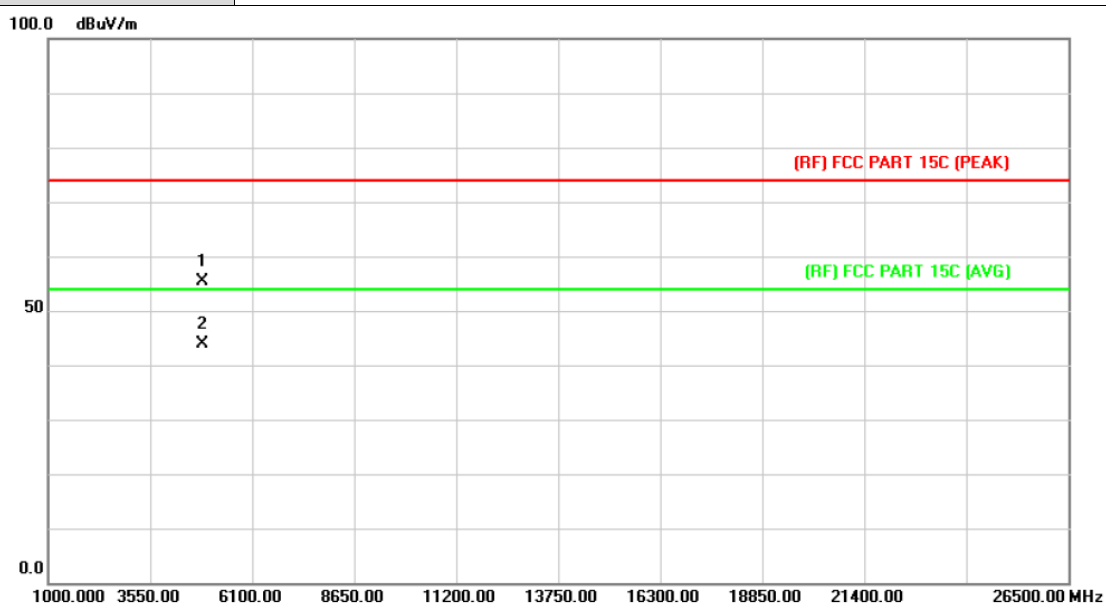
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2422MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4843.130	41.46	13.68	55.14	74.00	-18.86	peak
2	*	4843.530	29.59	13.68	43.27	54.00	-10.73	AVG

Emission Level= Read Level+ Correct Factor

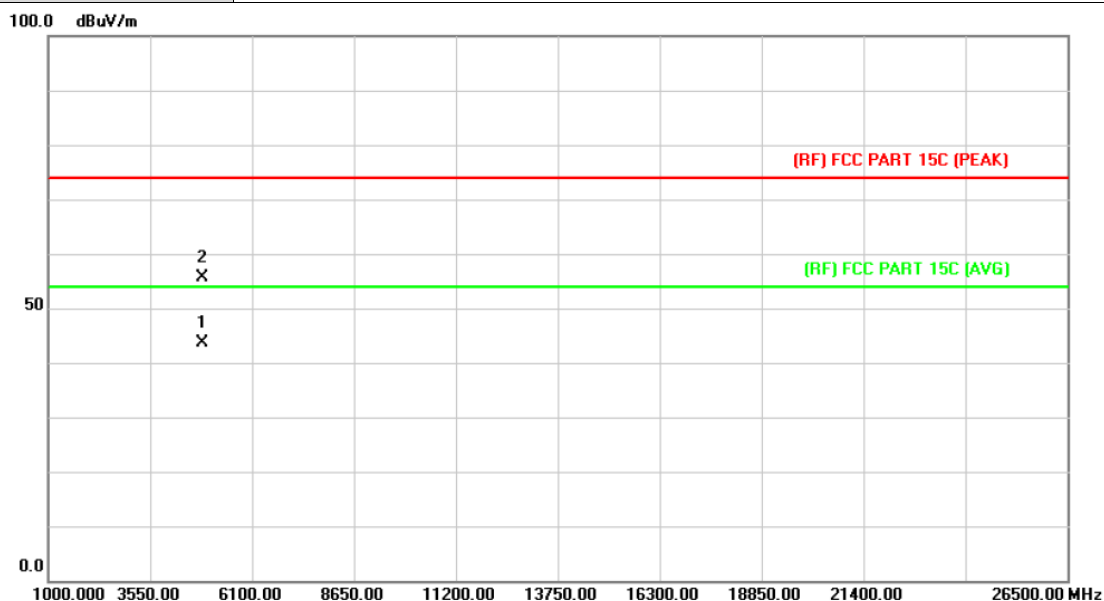
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2437MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1		4874.540	41.43	13.86	55.29	74.00	-18.71	peak
2	*	4874.630	29.98	13.86	43.84	54.00	-10.16	AVG

Emission Level= Read Level+ Correct Factor

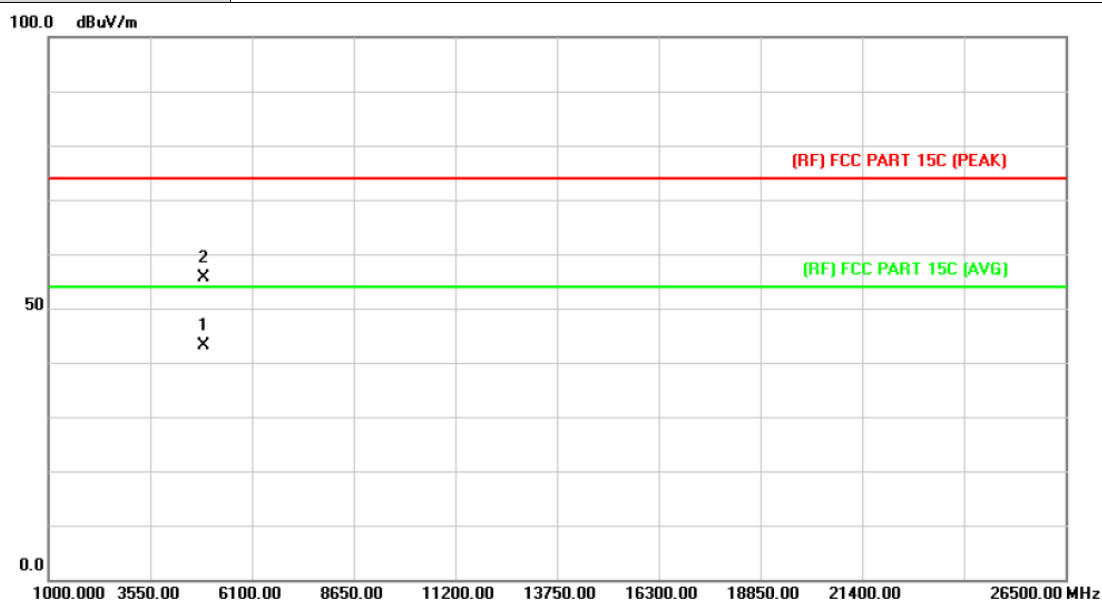
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2437MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4874.160	29.68	13.86	43.54	54.00	-10.46	AVG
2		4874.940	41.73	13.86	55.59	74.00	-18.41	peak

Emission Level= Read Level+ Correct Factor

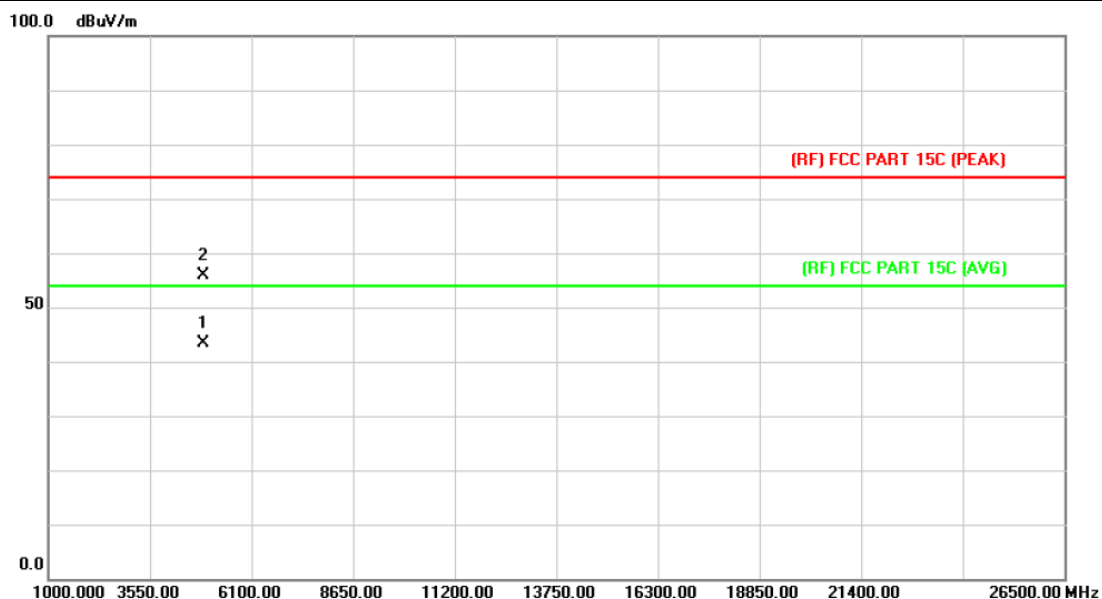
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2452MHz		
Remark:	No report for the emission which more than 10 dB below the prescribed limit.		



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector
1	*	4903.830	29.08	14.03	43.11	54.00	-10.89	AVG
2		4903.970	41.60	14.03	55.63	74.00	-18.37	peak

Emission Level= Read Level+ Correct Factor

EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2452MHz		
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		4903.310	29.31	14.03	43.34	74.00	-30.66	peak
2	*	4903.420	41.75	14.03	55.78	74.00	-18.22	peak

Emission Level= Read Level+ Correct Factor

6. Restricted Bands Requirement

6.1 Test Standard and Limit

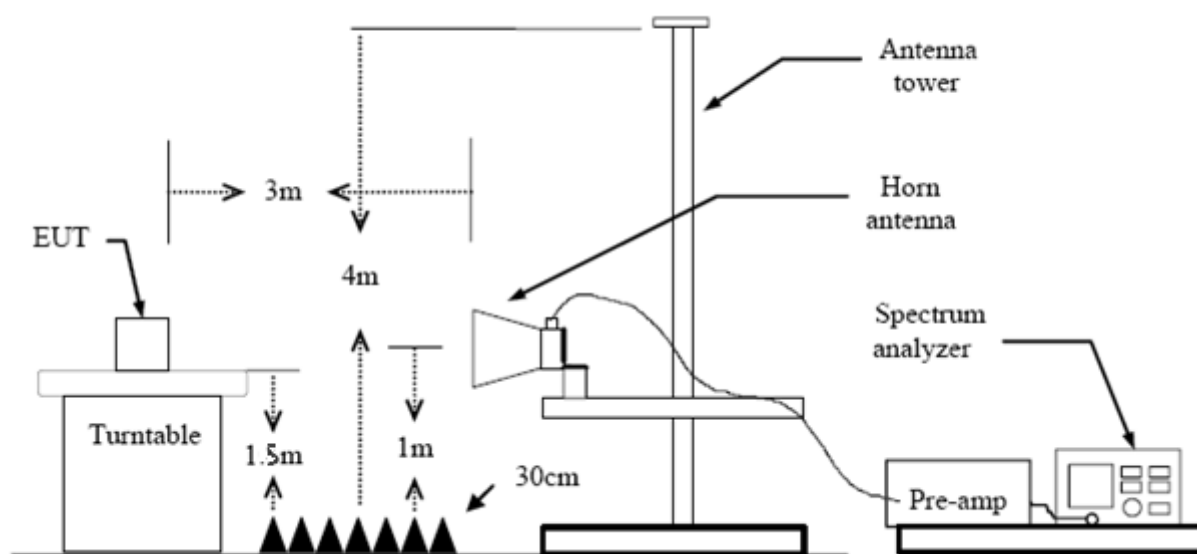
6.1.1 Test Standard

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

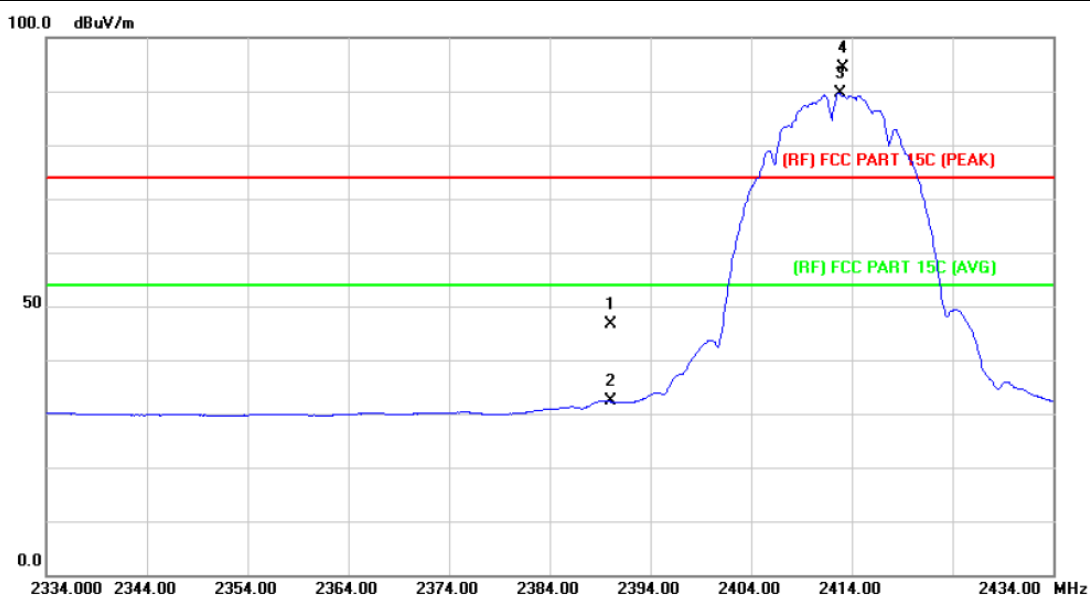
The Equipment Under Test was set to Continual Transmitting in maximum power.

6.5 Test Data

Please see the next page.

(1) Radiation Test

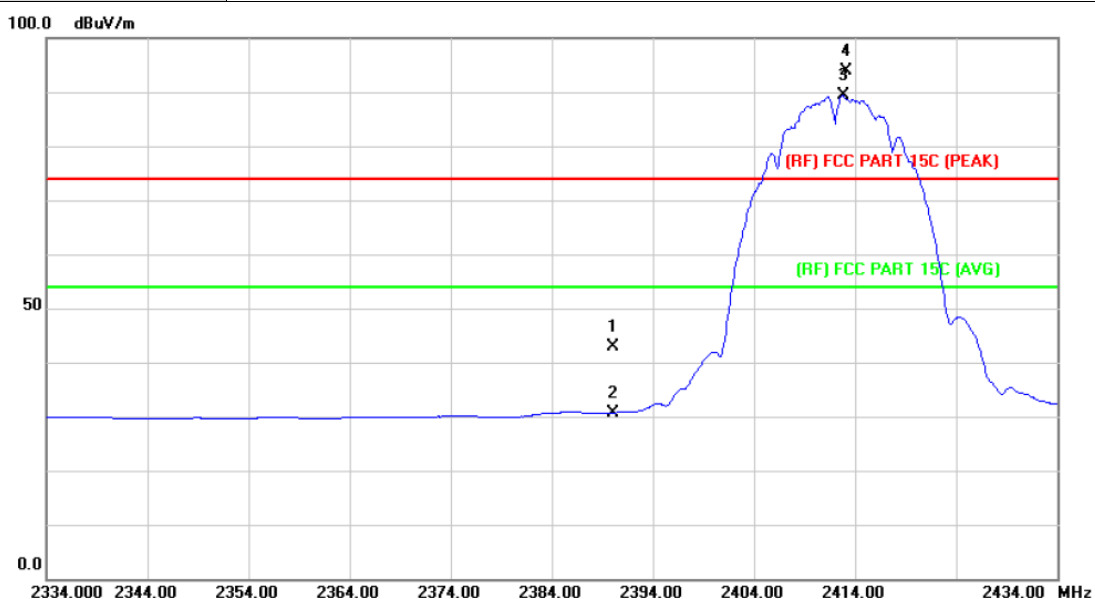
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2412MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	45.76	0.77	46.53	Fundamental Frequency		peak
2		2390.000	31.50	0.77	32.27	Fundamental Frequency		AVG
3	*	2412.800	88.85	0.86	89.71	54.00	35.71	AVG
4	X	2413.100	93.45	0.86	94.31	74.00	20.31	peak

Emission Level= Read Level+ Correct Factor

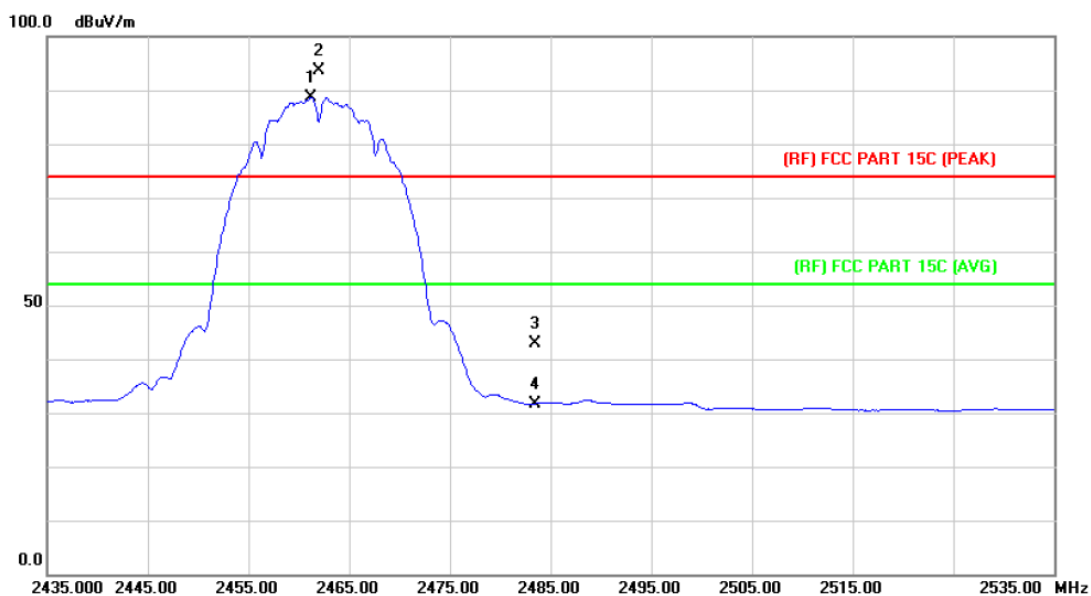
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2412MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	41.99	0.77	42.76	74.00	-31.24	peak
2		2390.000	29.96	0.77	30.73	54.00	-23.27	AVG
3	*	2412.800	88.42	0.86	89.28	Fundamental Frequency 74.00	15.28	AVG
4	X	2413.100	93.13	0.86	93.99	Fundamental Frequency 74.00	19.99	peak

Emission Level= Read Level+ Correct Factor

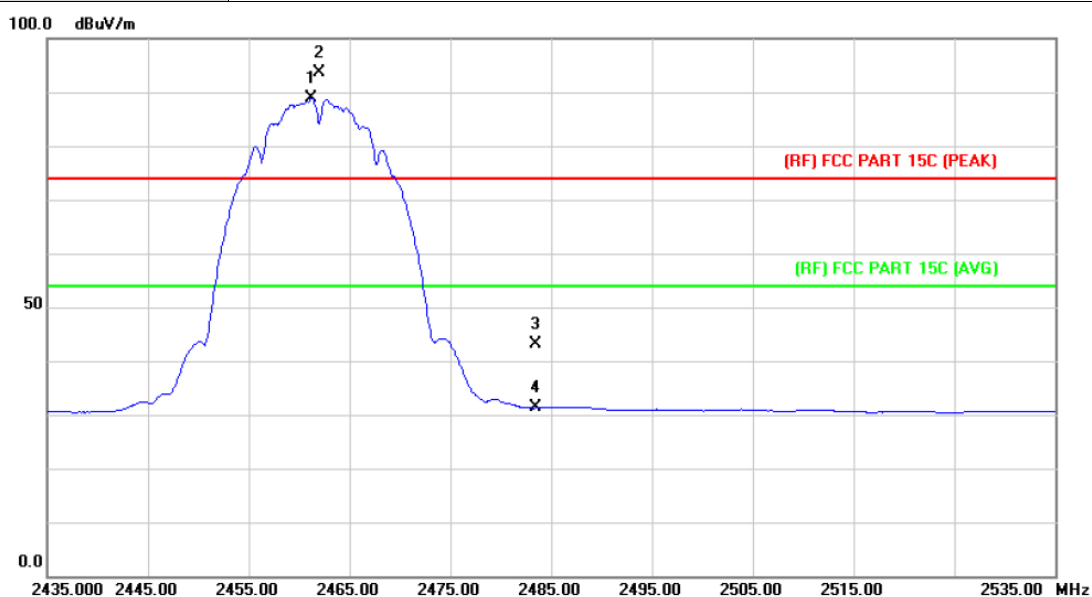
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX B Mode 2462MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	2461.200	87.61	1.07	88.68	Fundamental Frequency 54.00	34.68	AVG
2	X	2462.000	92.44	1.08	93.52	Fundamental Frequency 74.00	19.52	peak
3		2483.500	41.72	1.17	42.89	74.00	-31.11	peak
4		2483.500	30.55	1.17	31.72	54.00	-22.28	AVG

Emission Level= Read Level+ Correct Factor

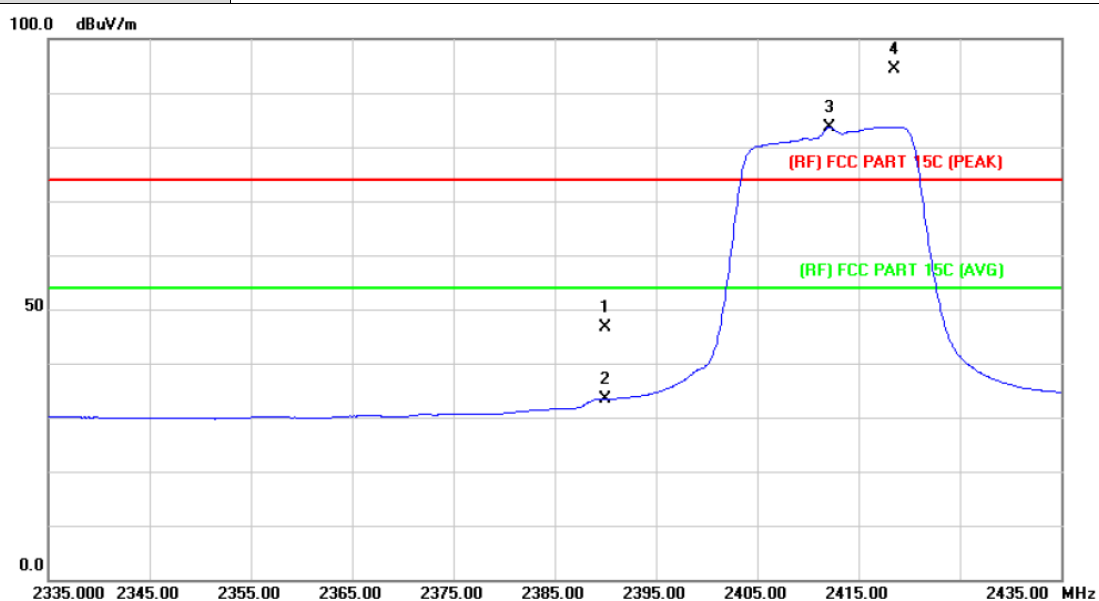
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX B Mode 2462MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	2461.200	87.77	1.07	88.84	Fundamental Frequency 54.00	34.84	AVG
2	X	2462.000	92.53	1.08	93.61	Fundamental Frequency 74.00	19.61	peak
3		2483.500	41.99	1.17	43.16	74.00	-30.84	peak
4		2483.500	30.11	1.17	31.28	54.00	-22.72	AVG

Emission Level= Read Level+ Correct Factor

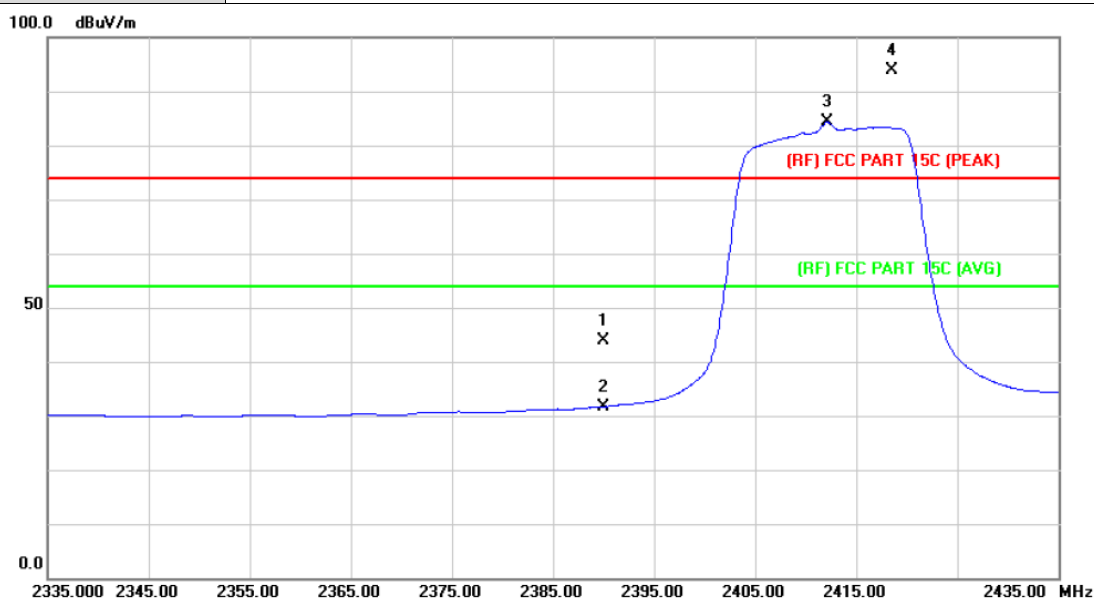
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2412MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	45.87	0.77	46.64	74.00	-27.36	peak
2		2390.000	32.61	0.77	33.38	54.00	-20.62	AVG
3	*	2412.100	82.86	0.86	83.72	Fundamental Frequency 54.00	29.72	AVG
4	X	2418.600	93.49	0.89	94.38	Fundamental Frequency 74.00	20.38	peak

Emission Level= Read Level+ Correct Factor

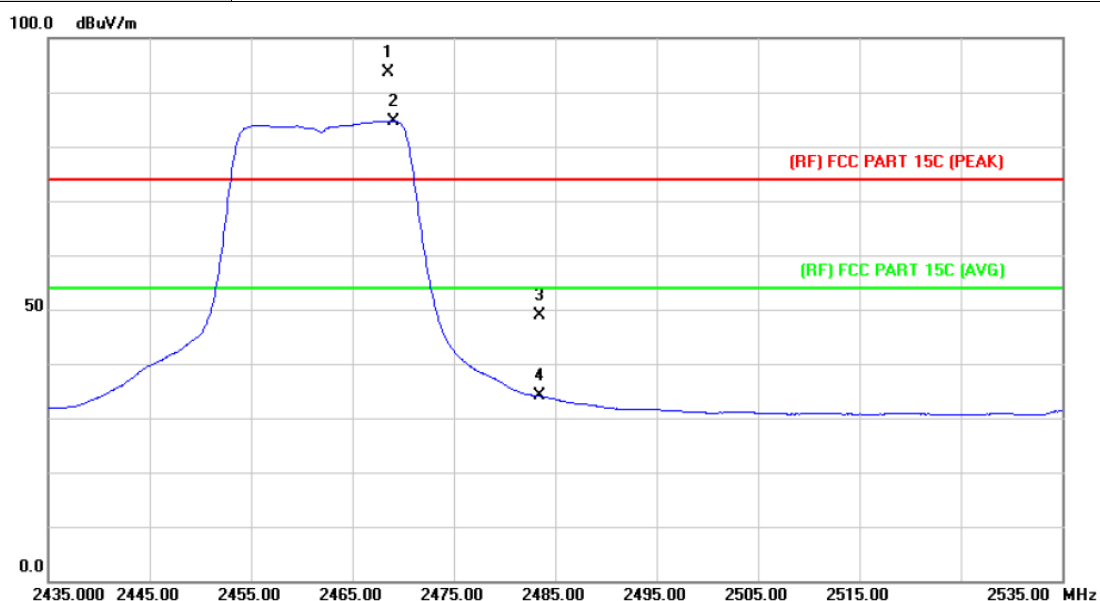
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2412MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	43.21	0.77	43.98	74.00	-30.02	peak
2		2390.000	30.98	0.77	31.75	54.00	-22.25	AVG
3	*	2412.100	83.44	0.86	84.30	54.00	30.30	AVG
4	X	2418.600	92.98	0.89	93.87	74.00	19.87	peak

Emission Level= Read Level+ Correct Factor

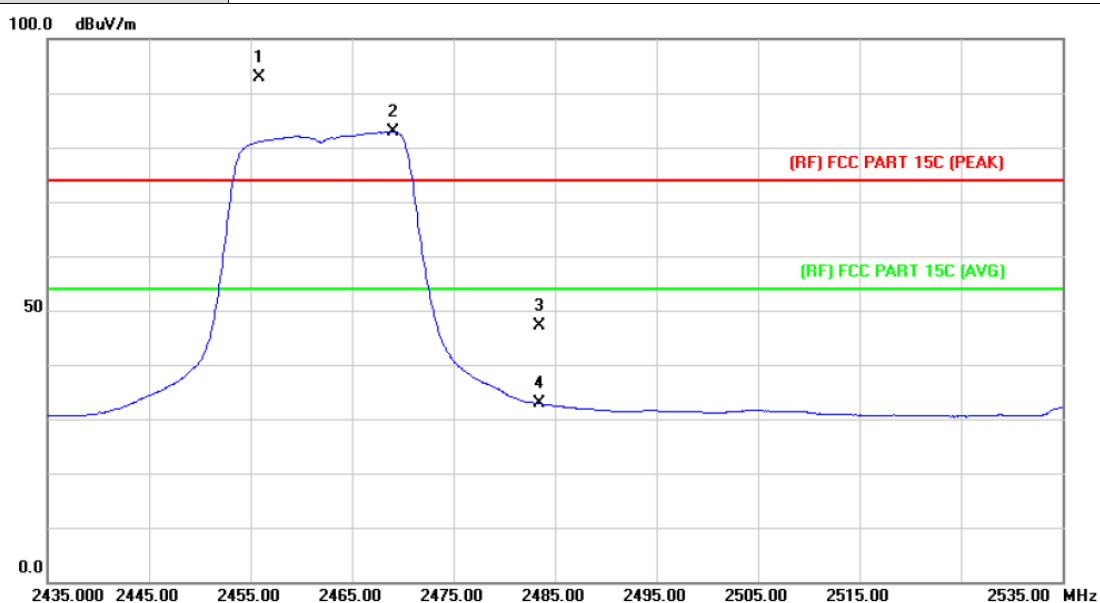
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX G Mode 2462MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2468.600	92.63	1.11	93.74	74.00	19.74	peak
2	*	2469.100	83.64	1.11	84.75	54.00	30.75	AVG
3		2483.500	47.83	1.17	49.00	74.00	-25.00	peak
4		2483.500	32.84	1.17	34.01	54.00	-19.99	AVG

Emission Level= Read Level+ Correct Factor

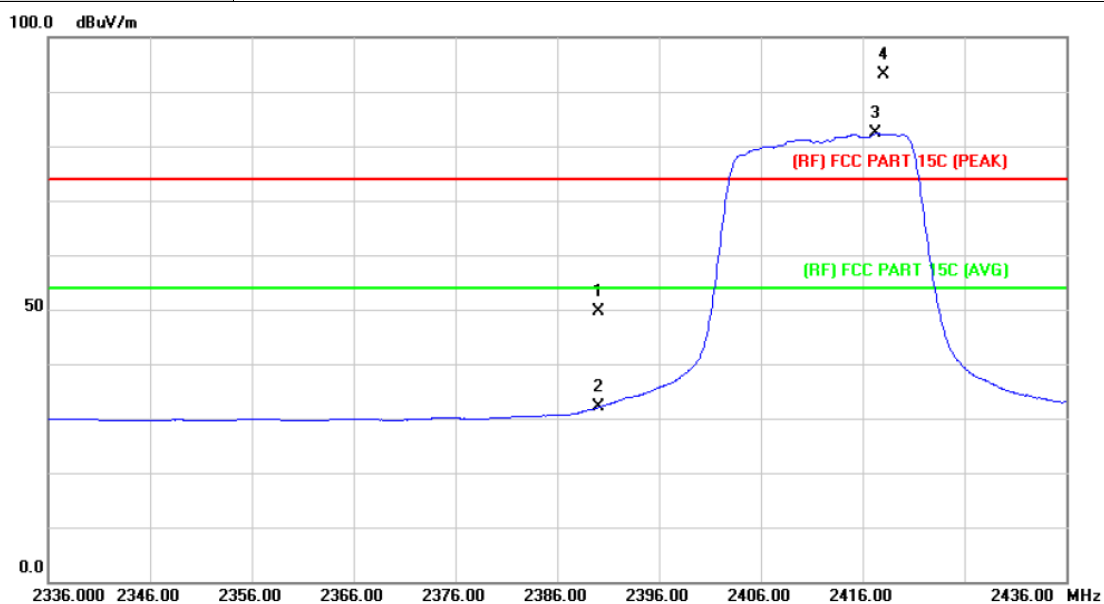
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX G Mode 2462MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2455.800	91.73	1.05	92.78	Fundamental Frequency 74.00	18.78	peak
2	*	2469.100	81.74	1.11	82.85	Fundamental Frequency 57.00	25.85	AVG
3		2483.500	45.84	1.17	47.01	74.00	-26.99	peak
4		2483.500	31.62	1.17	32.79	54.00	-21.21	AVG

Emission Level= Read Level+ Correct Factor

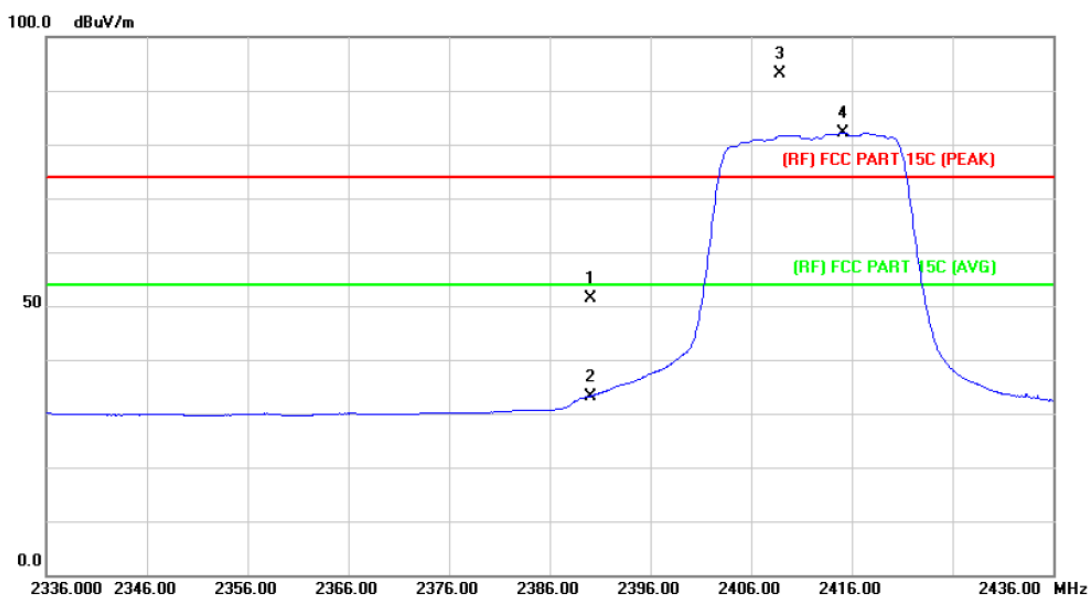
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2412MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	48.92	0.77	49.69	74.00	-24.31	peak
2		2390.000	31.28	0.77	32.05	54.00	-21.95	AVG
3	*	2417.300	81.39	0.89	82.28	Fundamental Frequency 54.00	28.28	AVG
4	X	2418.000	92.24	0.89	93.13	Fundamental Frequency 74.00	19.13	peak

Emission Level= Read Level+ Correct Factor

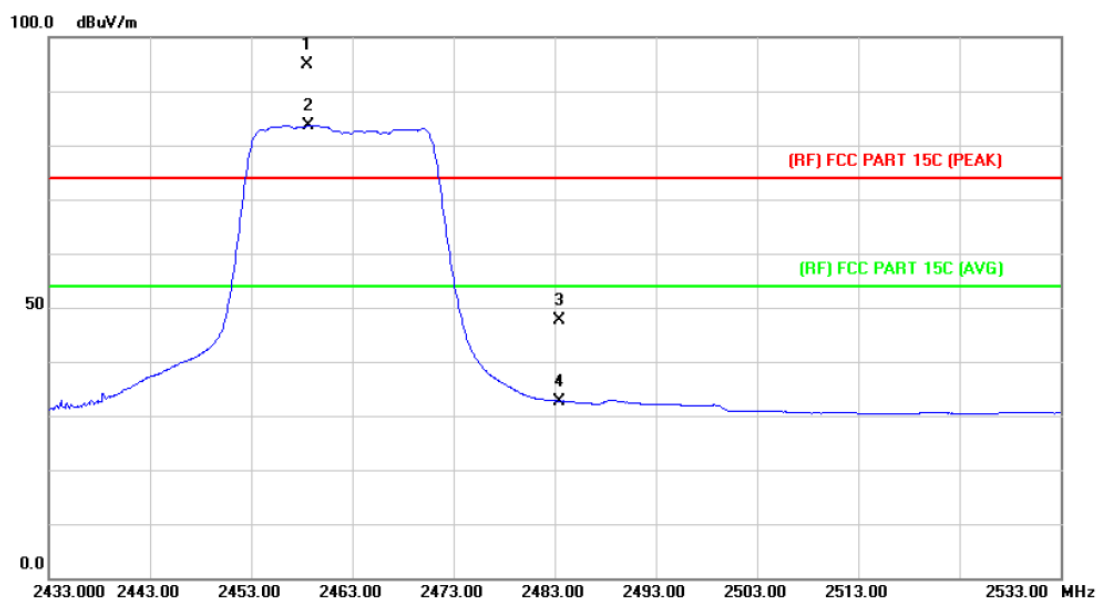
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2412MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	50.67	0.77	51.44	74.00	-22.56	peak
2		2390.000	32.47	0.77	33.24	54.00	-20.76	AVG
3	X	2408.800	92.21	0.85	93.06	Fundamental Frequency 74.00	19.06	peak
4	*	2415.200	81.32	0.88	82.20	Fundamental Frequency 54.00	28.20	AVG

Emission Level= Read Level+ Correct Factor

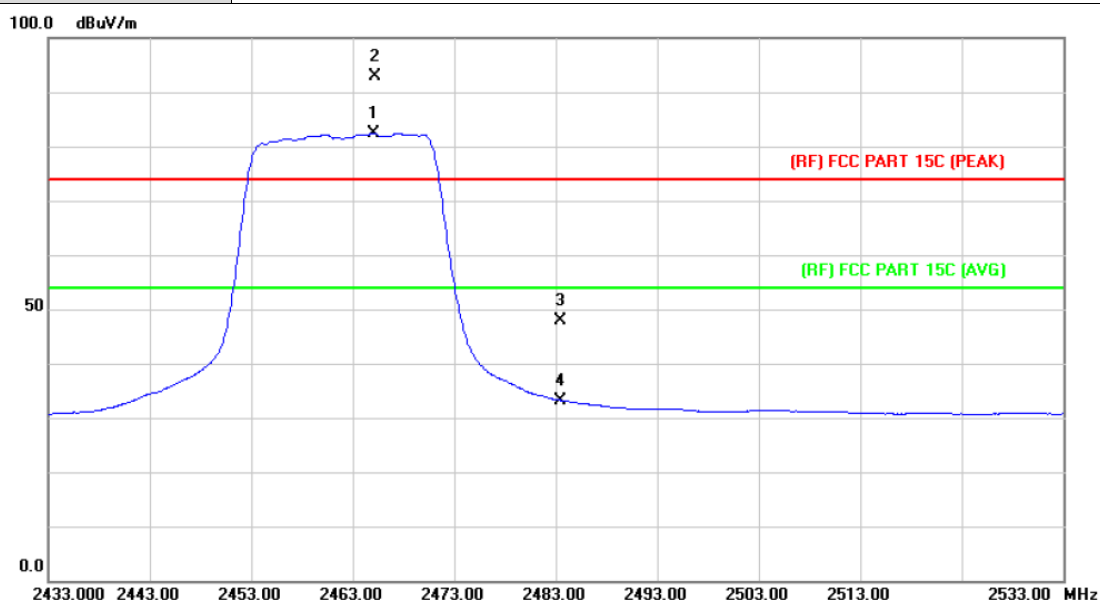
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT20) Mode 2462MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2458.600	93.91	1.06	94.97	74.00	20.97	peak
2	*	2458.700	82.68	1.06	83.74	54.00	29.74	AVG
3		2483.500	46.43	1.17	47.60	74.00	-26.40	peak
4		2483.500	31.56	1.17	32.73	54.00	-21.27	AVG

Emission Level= Read Level+ Correct Factor

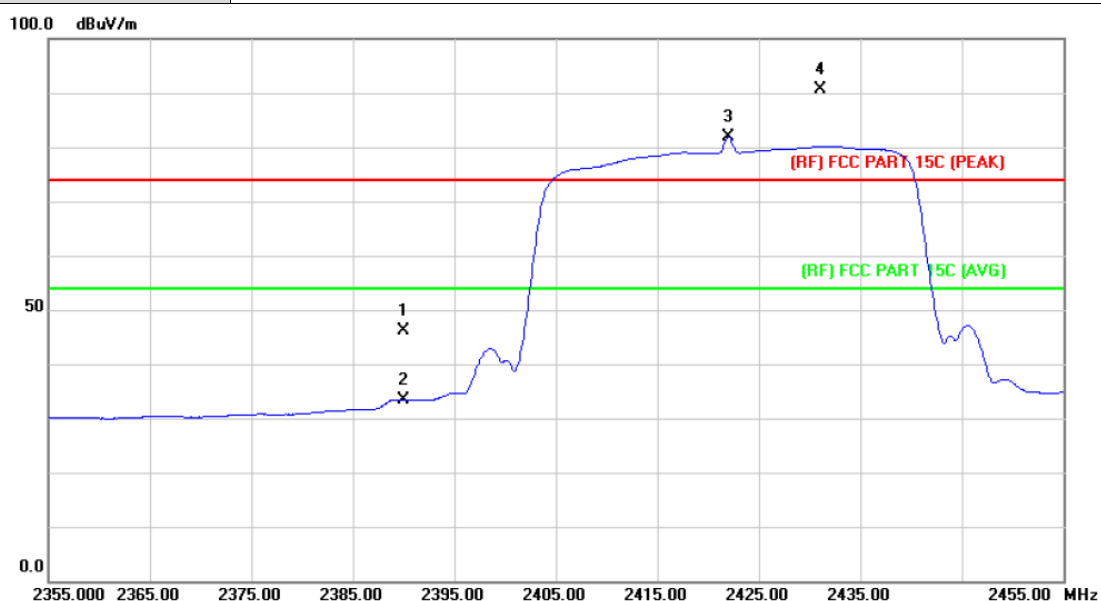
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT20) Mode 2462MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	2465.100	81.27	1.09	82.36	Fundamental Frequency 54.00	28.36	AVG
2	X	2465.200	91.67	1.09	92.76	Fundamental Frequency 74.00	18.76	peak
3		2483.500	46.71	1.17	47.88	74.00	-26.12	peak
4		2483.500	32.07	1.17	33.24	54.00	-20.76	AVG

Emission Level= Read Level+ Correct Factor

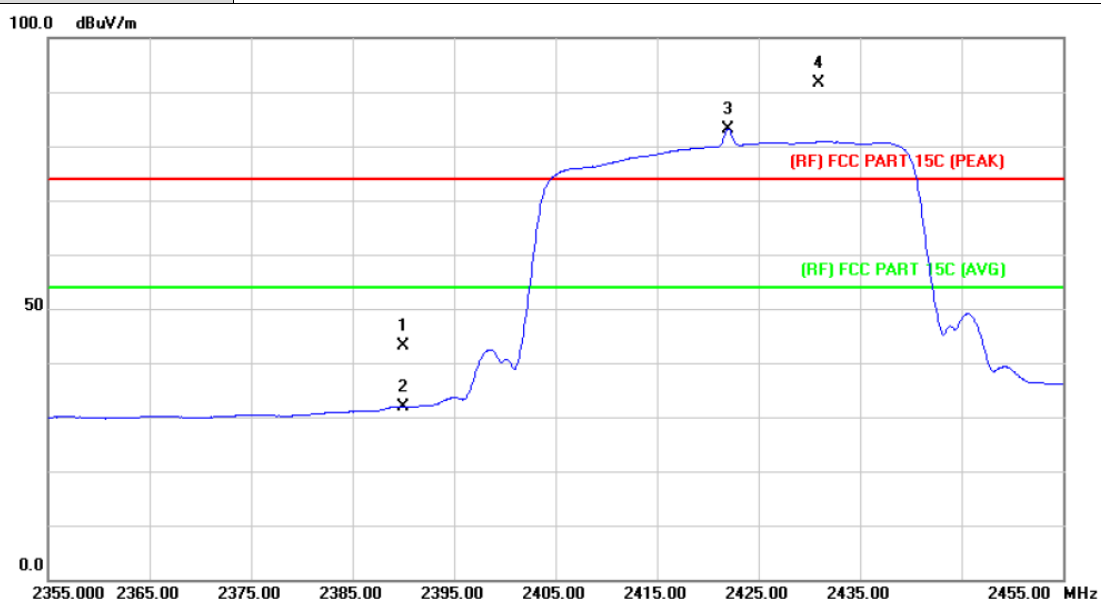
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2422MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	45.44	0.77	46.21	74.00	-27.79	peak
2		2390.000	32.57	0.77	33.34	54.00	-20.66	AVG
3	*	2422.000	80.99	0.90	81.89	Fundamental Frequency 54.00	27.89	AVG
4	X	2431.000	89.71	0.95	90.66	Fundamental Frequency 74.00	16.66	peak

Emission Level= Read Level+ Correct Factor

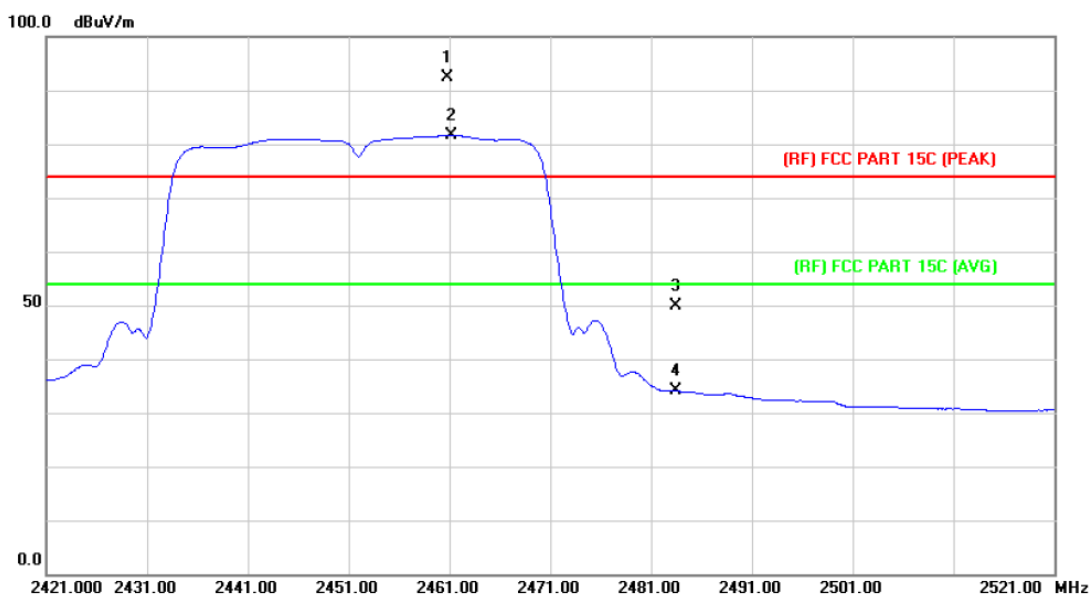
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2422MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1		2390.000	42.28	0.77	43.05	74.00	-30.95	peak
2		2390.000	31.08	0.77	31.85	54.00	-22.15	AVG
3	*	2422.000	82.17	0.90	83.07	Fundamental Frequency 54.00 29.07		AVG
4	X	2430.900	90.68	0.95	91.63	Fundamental Frequency 74.00 17.63		peak

Emission Level= Read Level+ Correct Factor

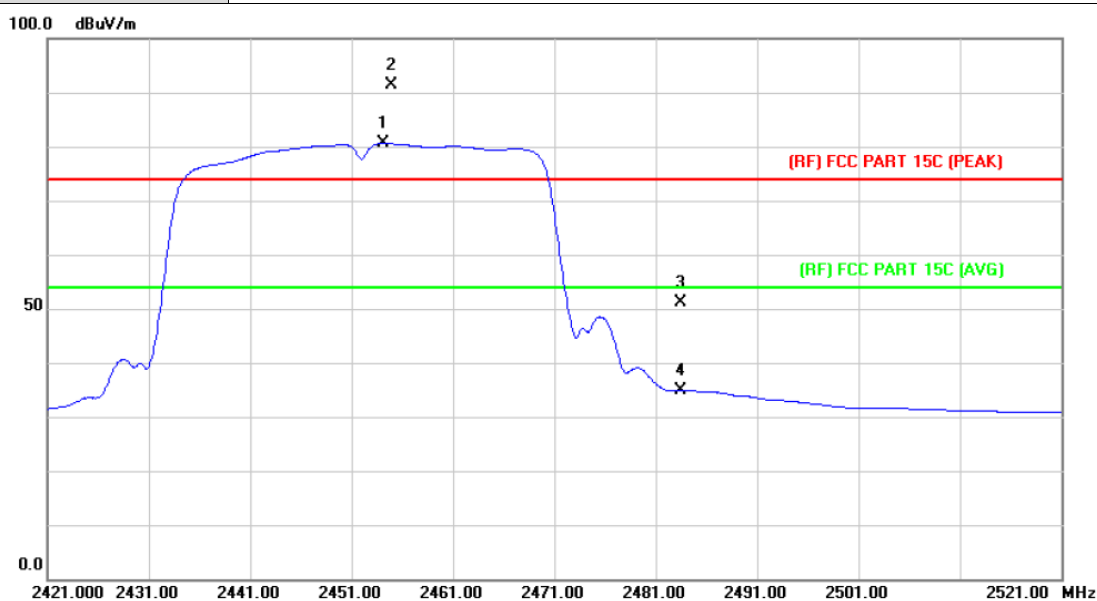
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Horizontal		
Test Mode:	TX N(HT40) Mode 2452MHz		
Remark:	N/A		



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	X	2460.800	91.42	1.06	92.48	Fundamental Frequency 77.00	15.48	peak
2	*	2461.200	80.61	1.07	81.68	Fundamental Frequency 54.00	27.68	AVG
3		2483.500	48.83	1.17	50.00	74.00	-24.00	peak
4		2483.500	32.87	1.17	34.04	54.00	-19.96	AVG

Emission Level= Read Level+ Correct Factor

EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Ant. Pol.	Vertical		
Test Mode:	TX N(HT40) Mode 2452MHz		
Remark:	N/A		

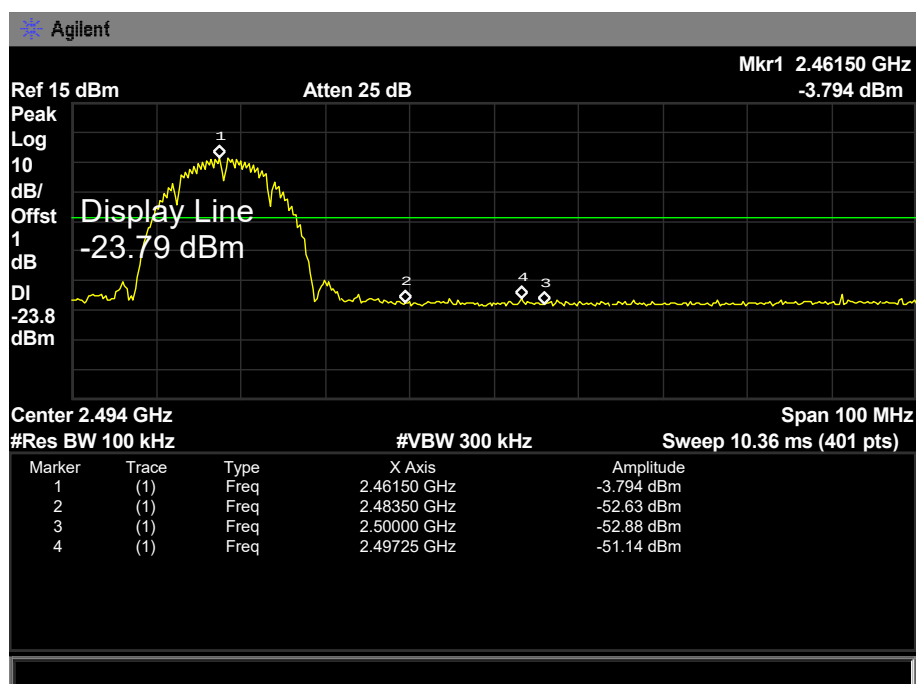
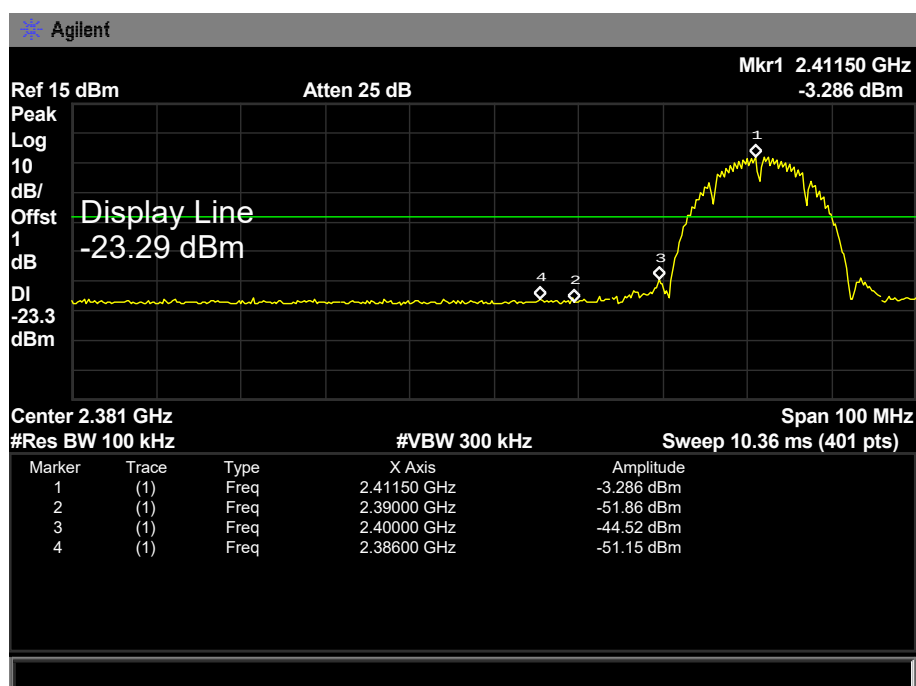


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB/m	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	2454.200	79.51	1.04	80.55	54.00	26.55	AVG
2	X	2454.900	90.33	1.05	91.38	74.00	17.38	peak
3		2483.500	50.04	1.17	51.21	74.00	-22.79	peak
4		2483.500	33.60	1.17	34.77	54.00	-19.23	AVG

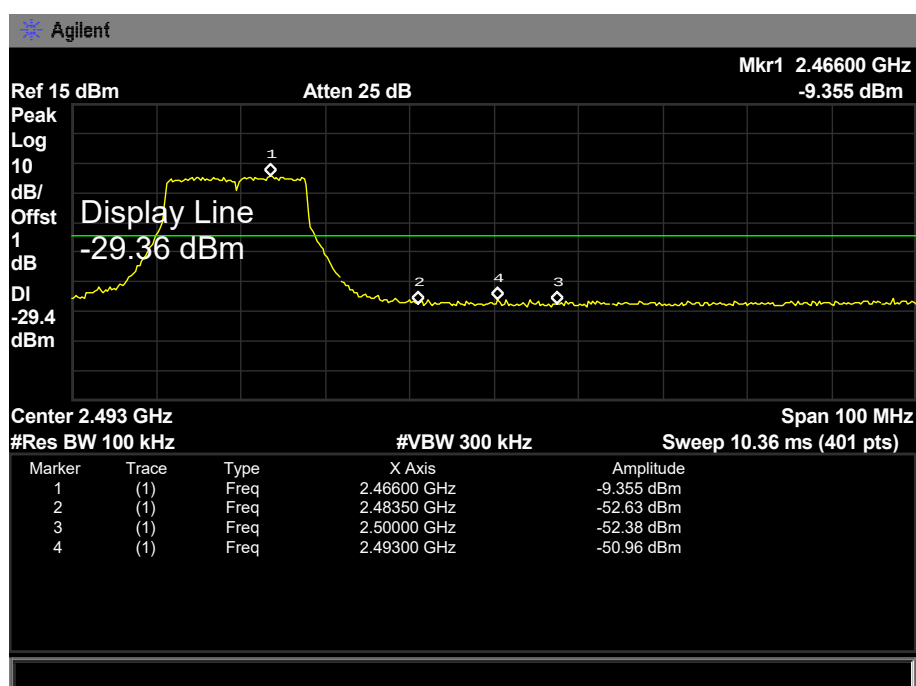
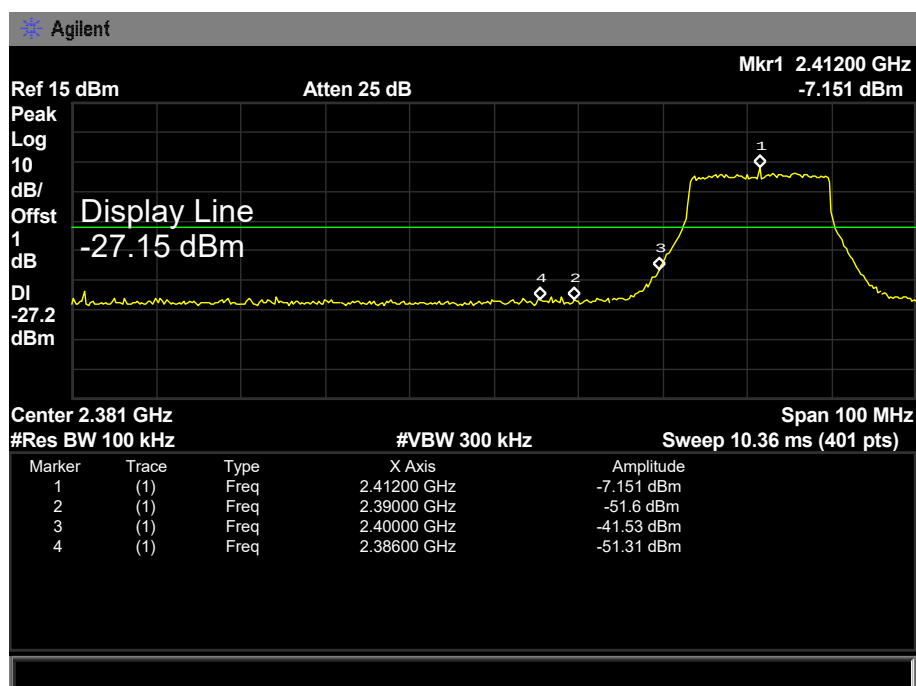
Emission Level= Read Level+ Correct Factor

(2) Conducted Test

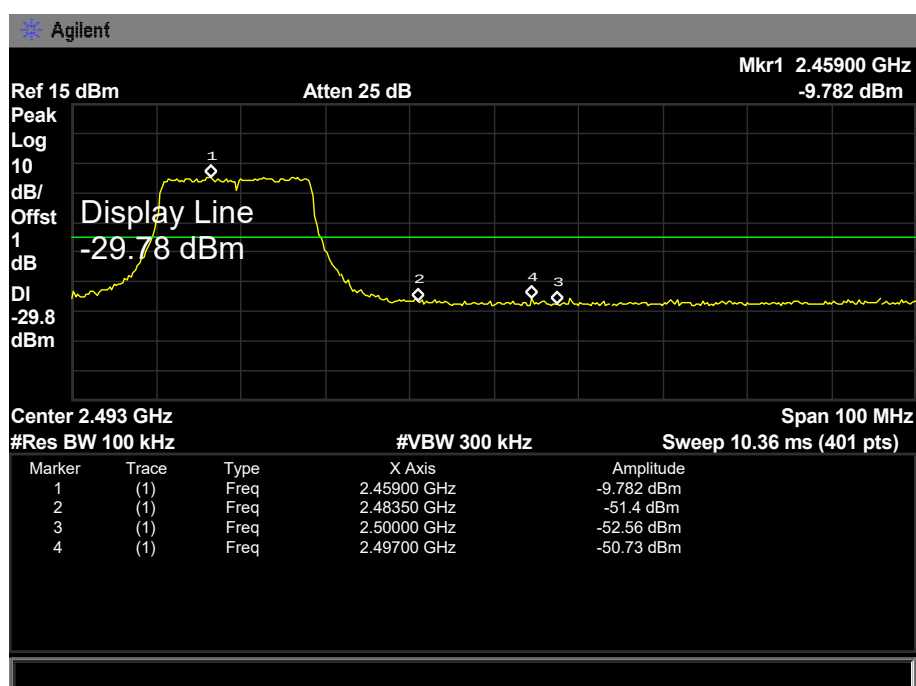
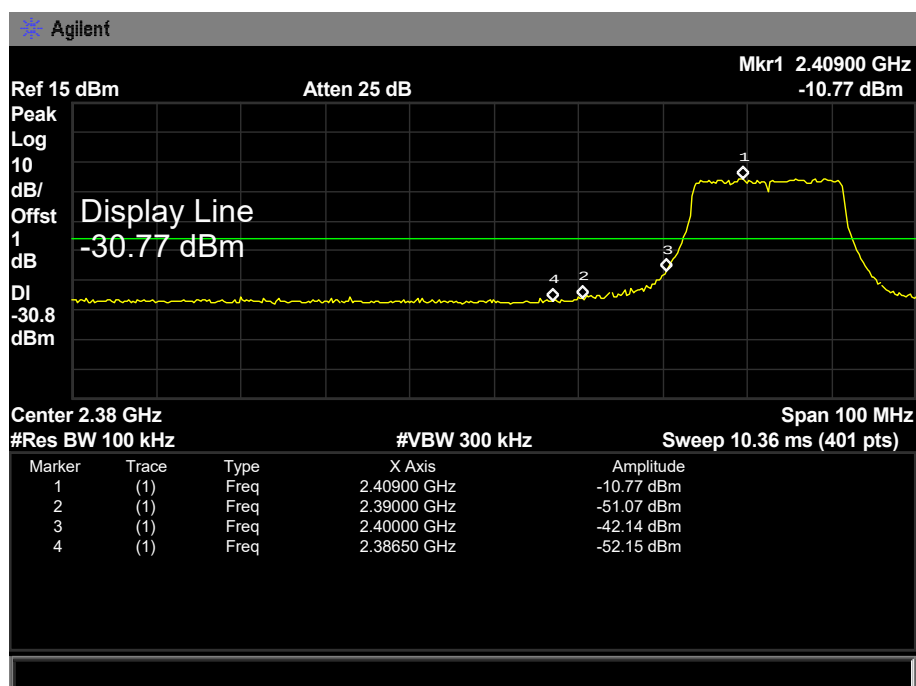
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX B Mode 2412MHz / TX B Mode 2462MHz		
Remark:	The EUT is programed in continuously transmitting mode		



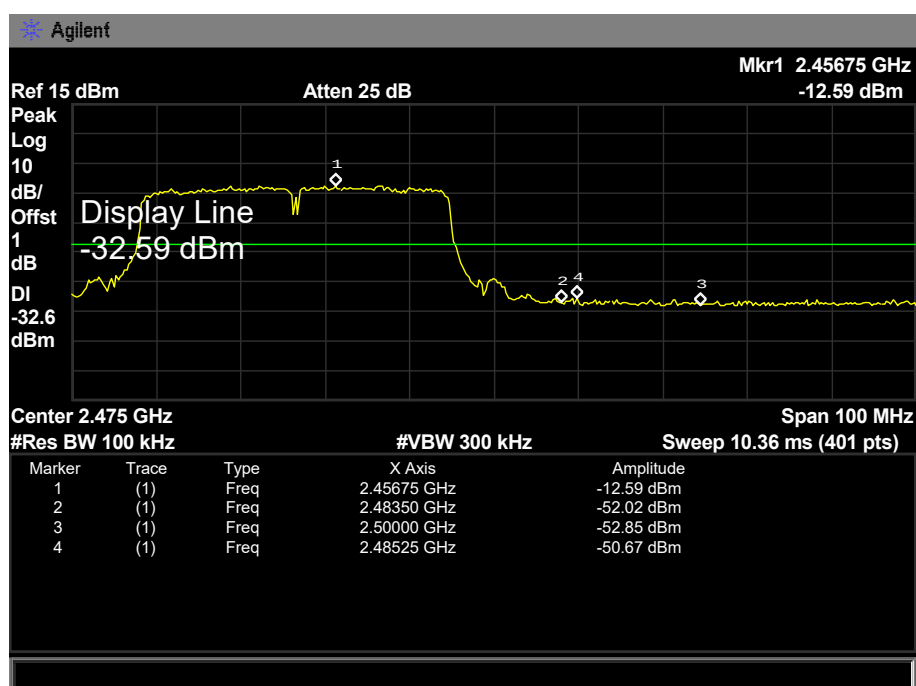
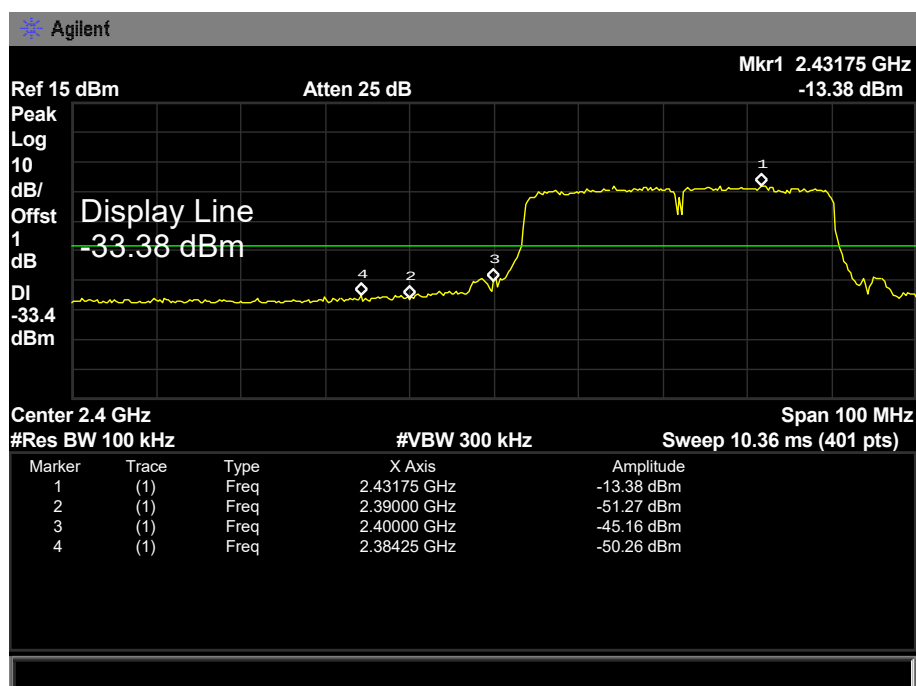
EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX G Mode 2412MHz / TX G Mode 2462MHz		
Remark:	The EUT is programed in continuously transmitting mode		



EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX N(HT20) Mode 2412MHz / TX N(HT20) Mode 2462MHz		
Remark:	The EUT is programed in continuously transmitting mode		



EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX N(HT40) Mode 2422MHz / TX N(HT40) Mode 2452MHz		
Remark:	The EUT is programed in continuously transmitting mode		



7. Bandwidth Test

7.1 Test Standard and Limit

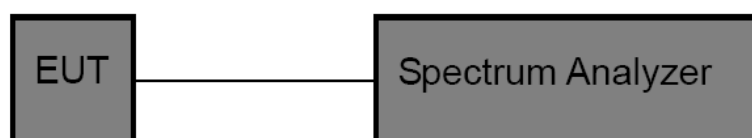
7.1.1 Test Standard

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

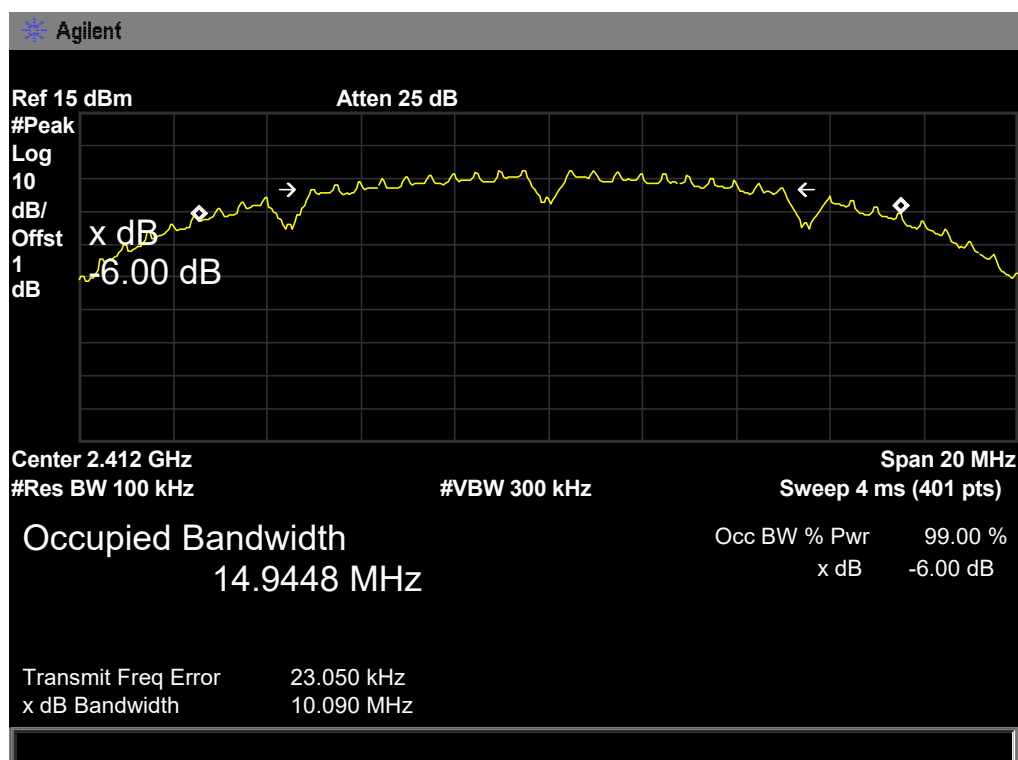
The EUT was set to continuously transmitting in each mode and low, middle and high channel for the test.

7.5 Test Data

EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11B Mode		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	10.090	14.9448	>=0.5
2437	10.065	14.7093	
2462	10.076	14.9025	

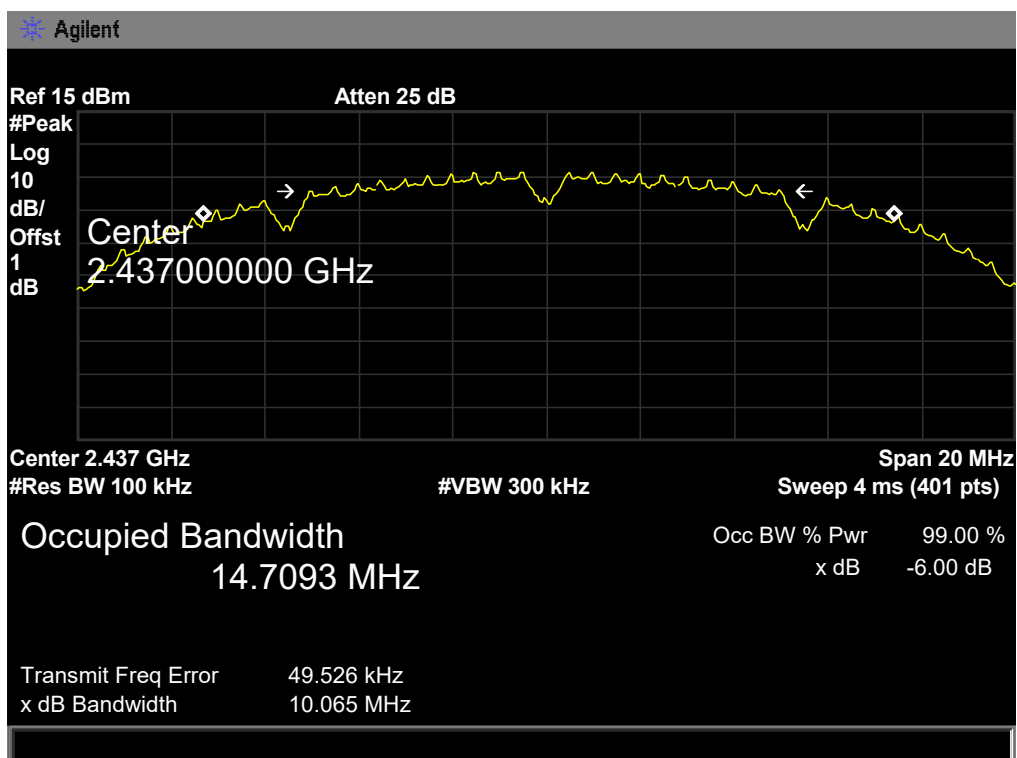
802.11B Mode

2412 MHz



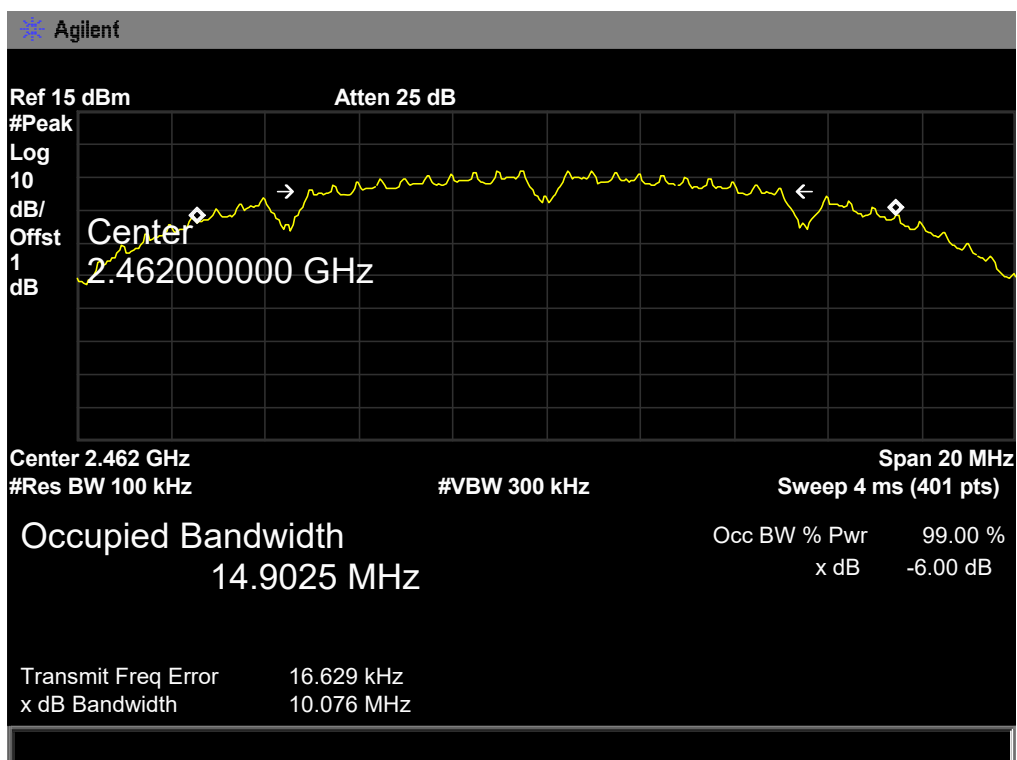
802.11B Mode

2437 MHz

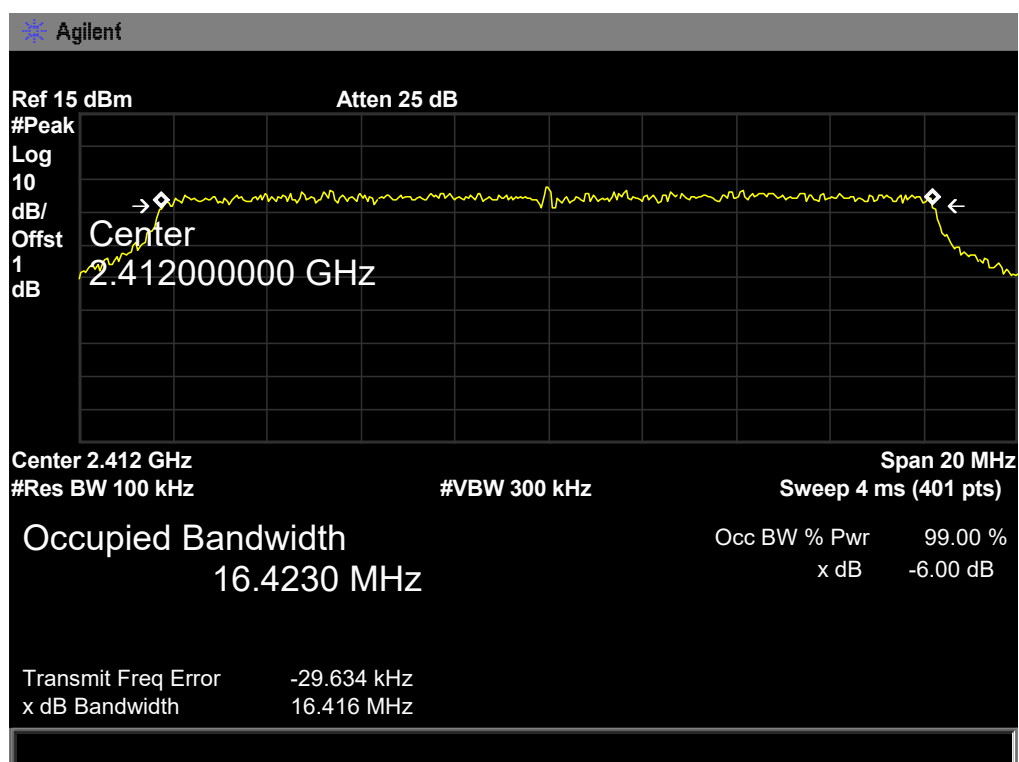


802.11B Mode

2462 MHz

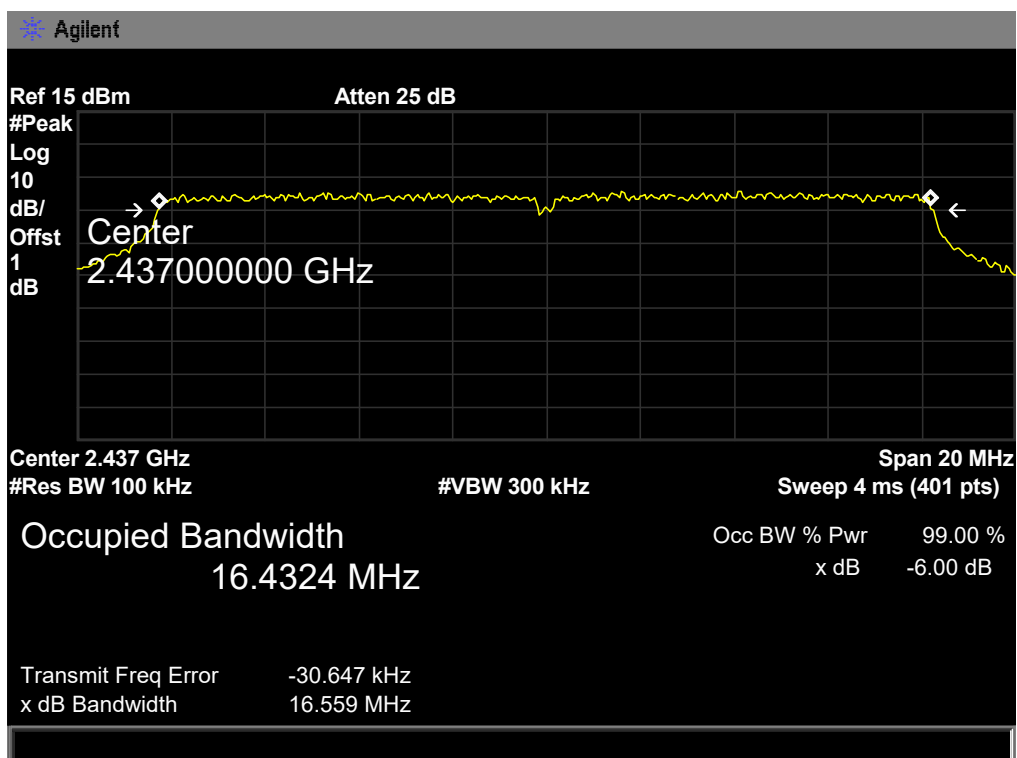


EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11G Mode		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	16.416	16.4230	>=0.5
2437	16.559	16.4324	
2462	16.568	16.4408	

802.11G Mode**2412 MHz**

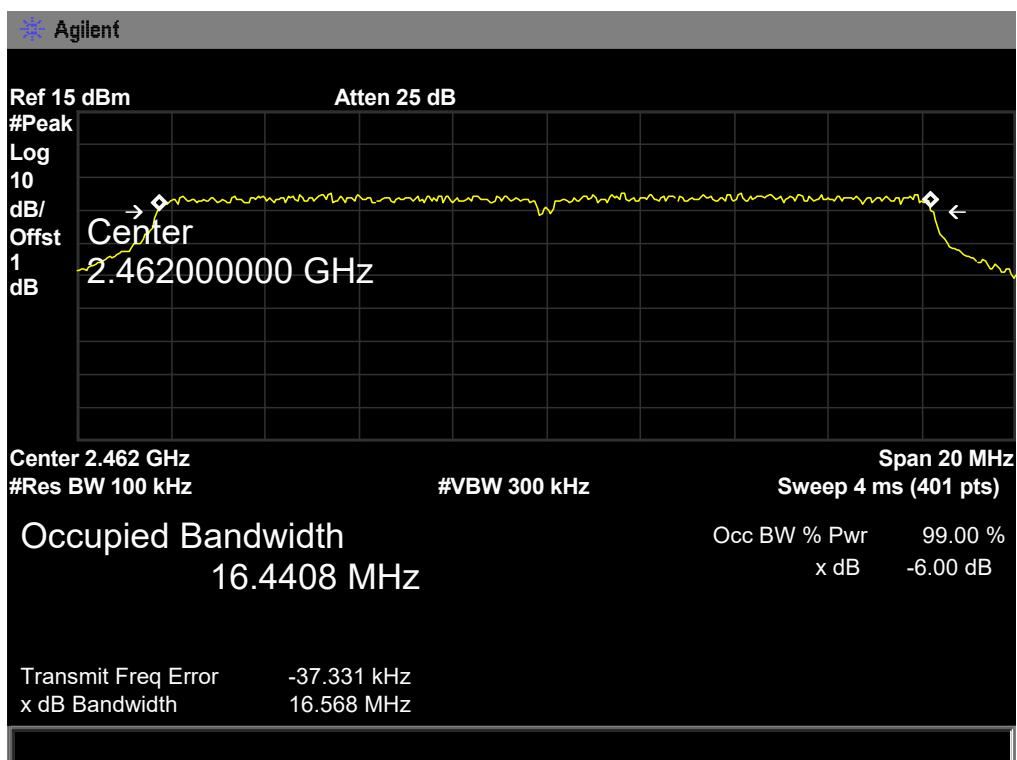
802.11G Mode

2437 MHz

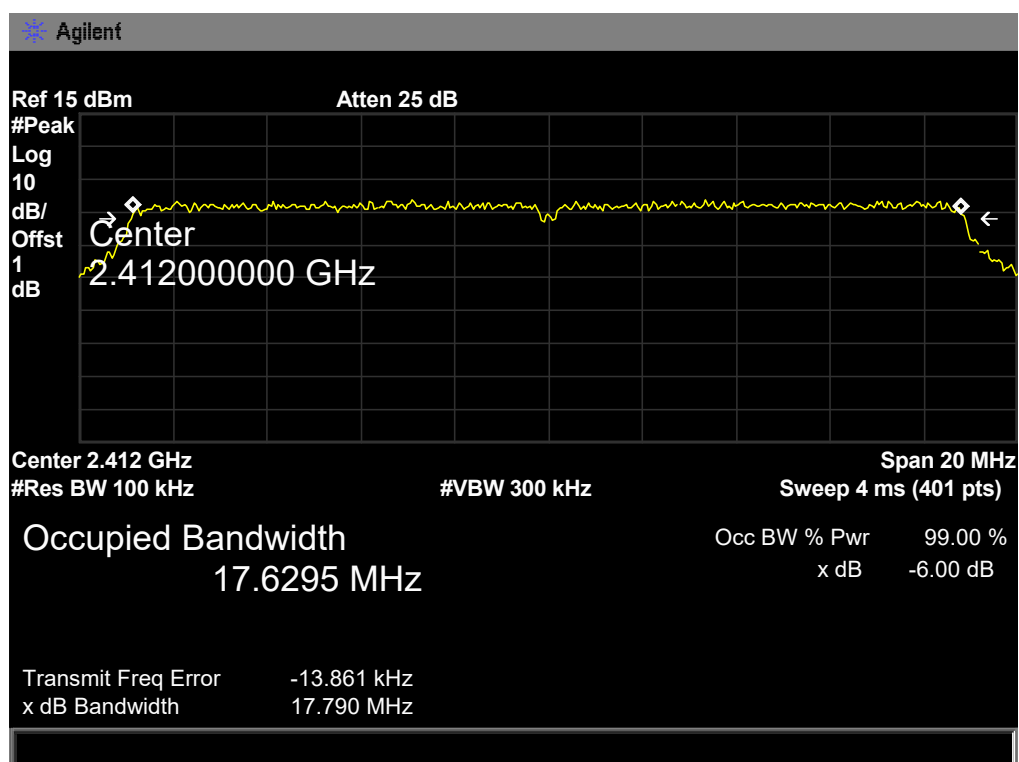


802.11G Mode

2462 MHz

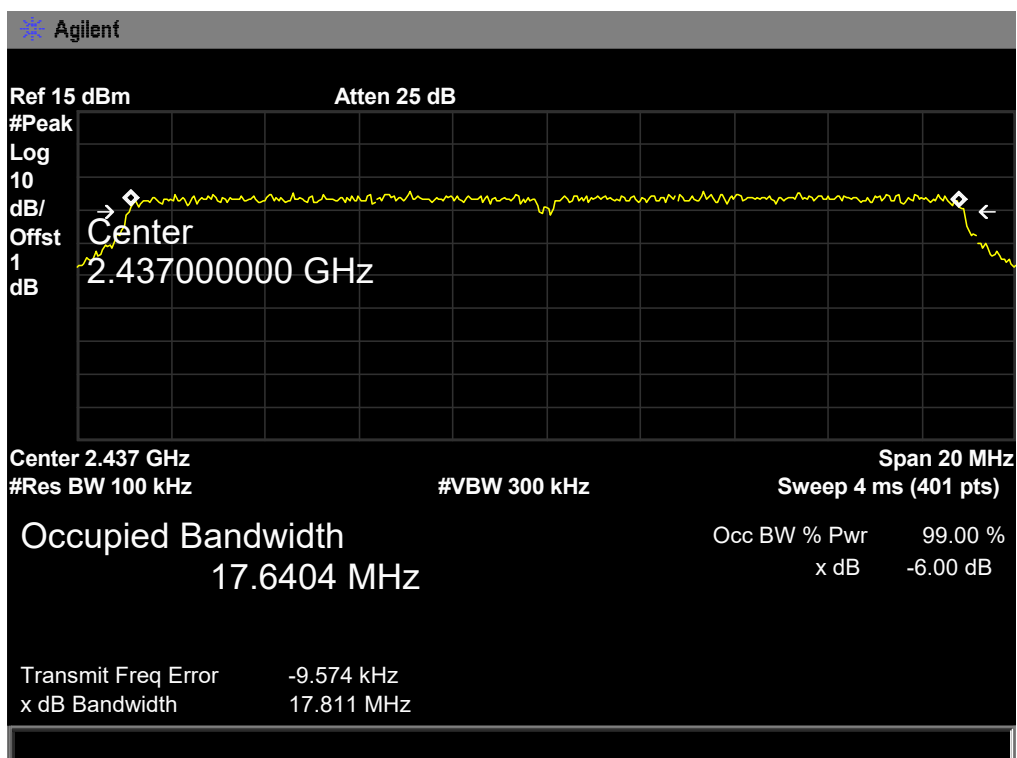


EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11N(HT20) Mode		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	17.790	17.6295	>=0.5
2437	17.811	17.6404	
2462	17.812	17.6313	

802.11N(HT20) Mode**2412 MHz**

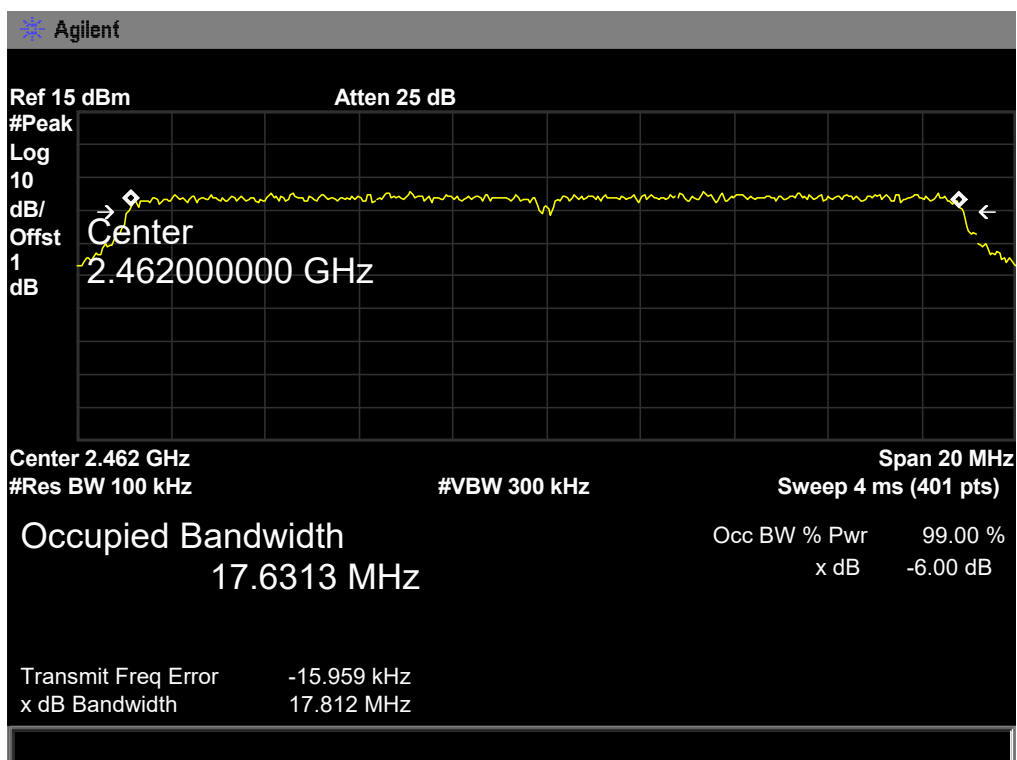
802.11N(HT20) Mode

2437 MHz

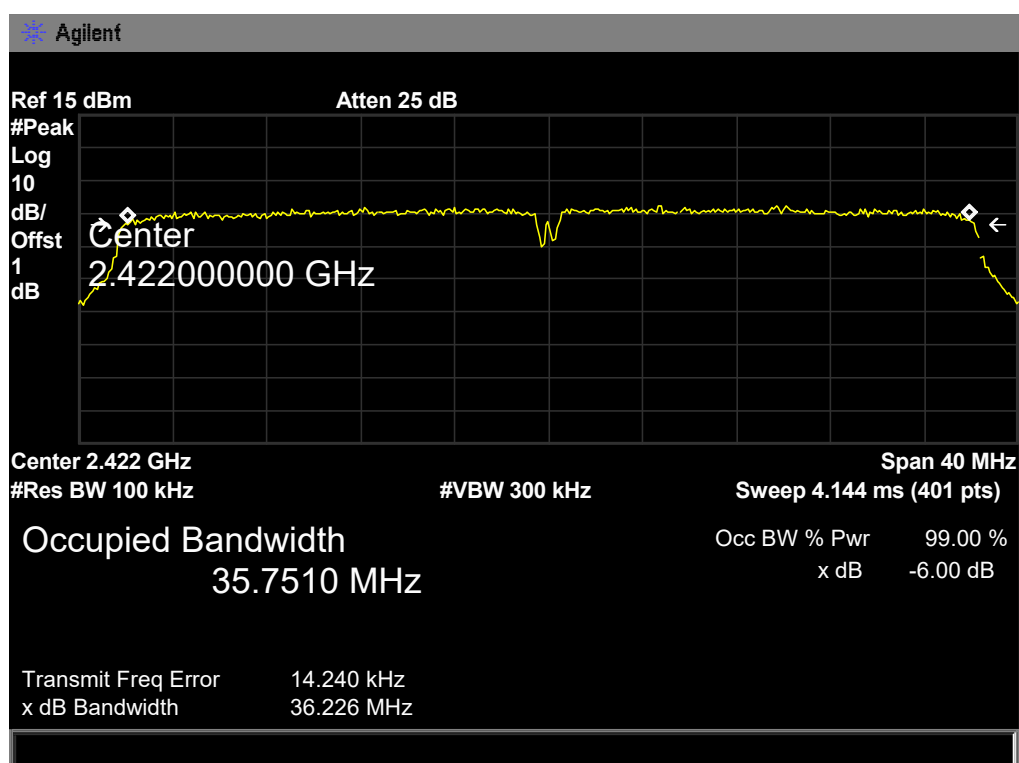


802.11N(HT20) Mode

2462 MHz

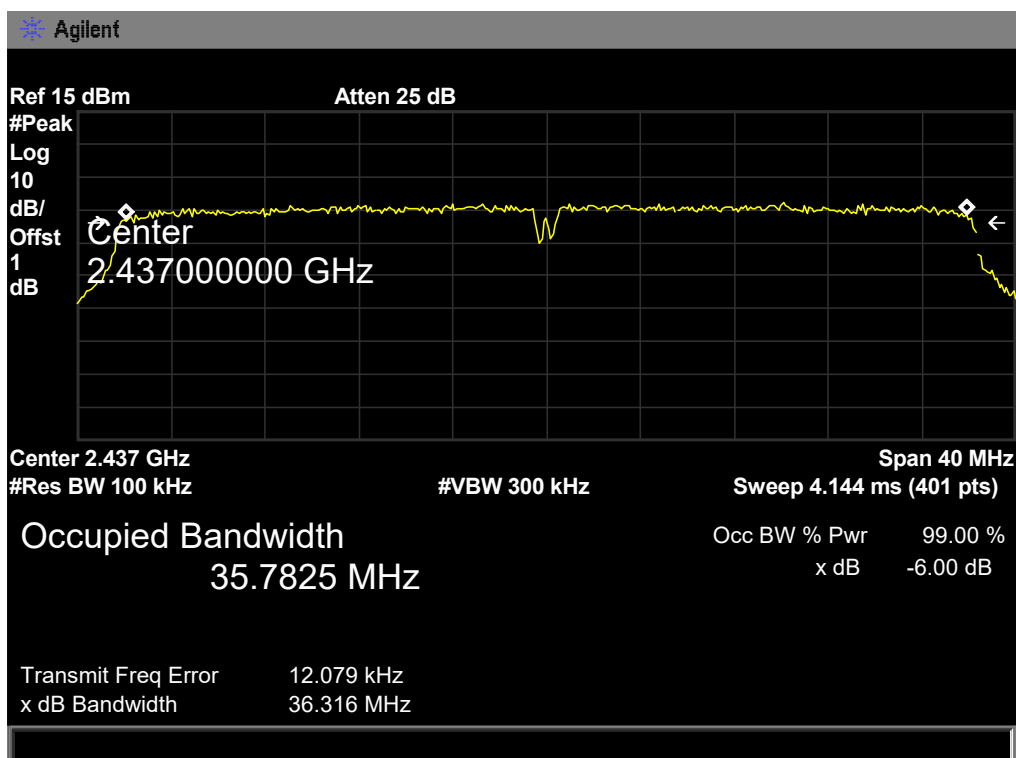


EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11N(HT40) Mode		
Channel frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit (MHz)
2412	36.226	35.7510	>=0.5
2437	36.316	35.7825	
2462	36.228	35.7555	

802.11N(HT40) Mode**2422 MHz**

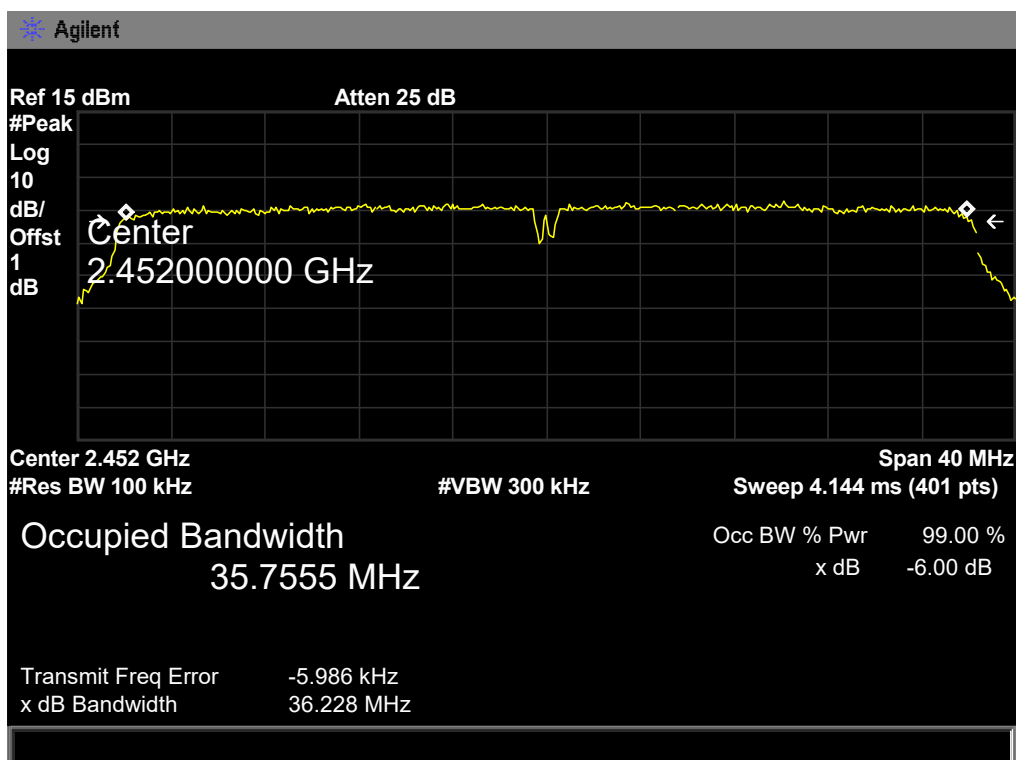
802.11N(HT40) Mode

2437 MHz



802.11N(HT40) Mode

2452 MHz



8. Peak Output Power Test

8.1 Test Standard and Limit

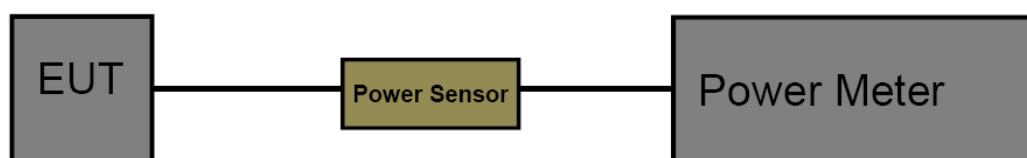
8.1.1 Test Standard

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 v03r02.

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:	Pos terminal	Model Name :	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Mode	Channel frequency (MHz)	Test Result (dBm)	Limit (dBm)
802.11b	2412	9.13	30
	2437	9.18	
	2462	9.15	
802.11g	2412	9.08	
	2437	9.06	
	2462	9.11	
802.11n (HT20)	2412	9.06	
	2437	9.02	
	2462	9.03	
802.11n (HT40)	2422	9.01	
	2437	9.07	
	2452	9.05	
Result: PASS			

9. Power Spectral Density Test

9.1 Test Standard and Limit

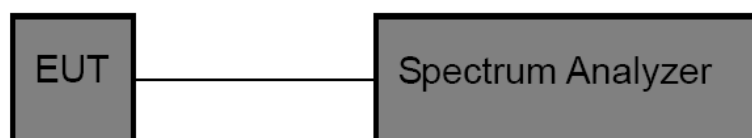
9.1.1 Test Standard

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 v03r02.

- (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

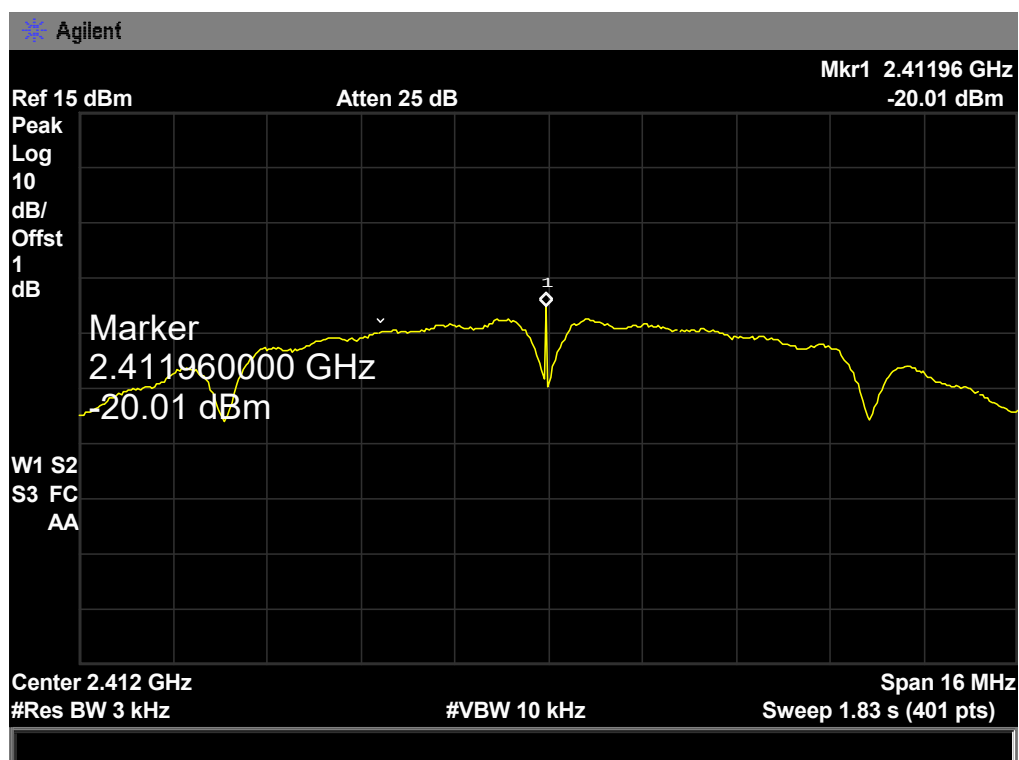
The EUT was set to continuously transmitting in each mode and low, middle and high channel for the test.

9.5 Test Data

EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11B Mode		
Channel Frequency (MHz)	Power Density (3 kHz/dBm)	Limit (dBm)	
2412	-20.01	8	
2437	-19.63		
2462	-18.71		

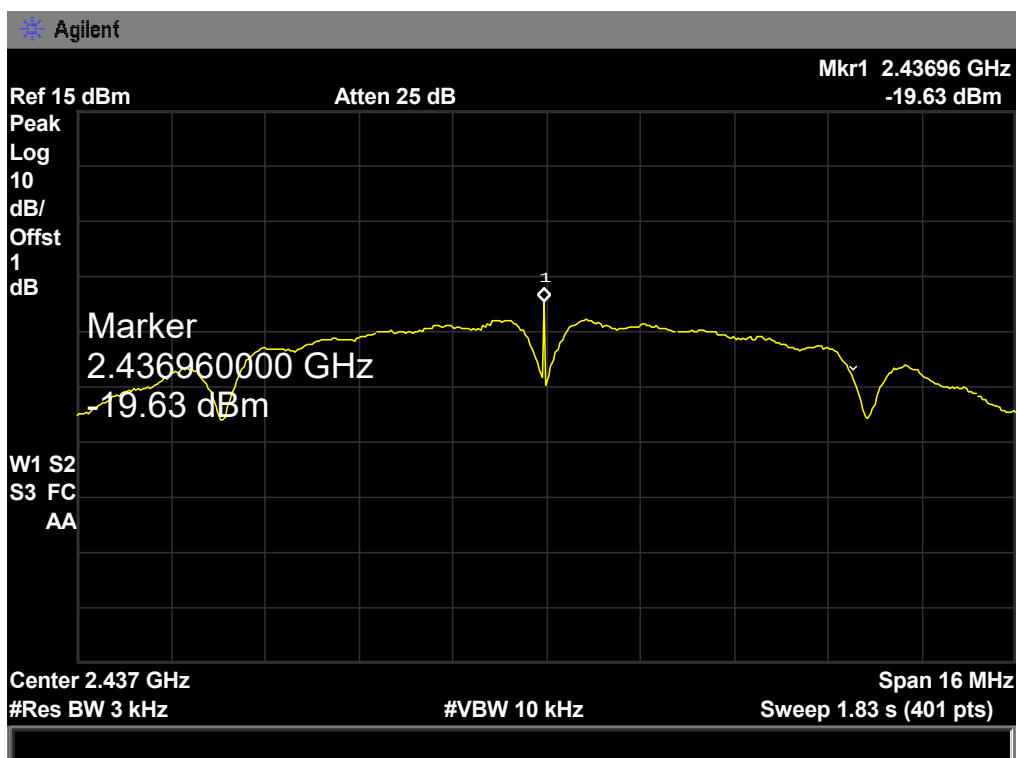
802.11B Mode

2412 MHz



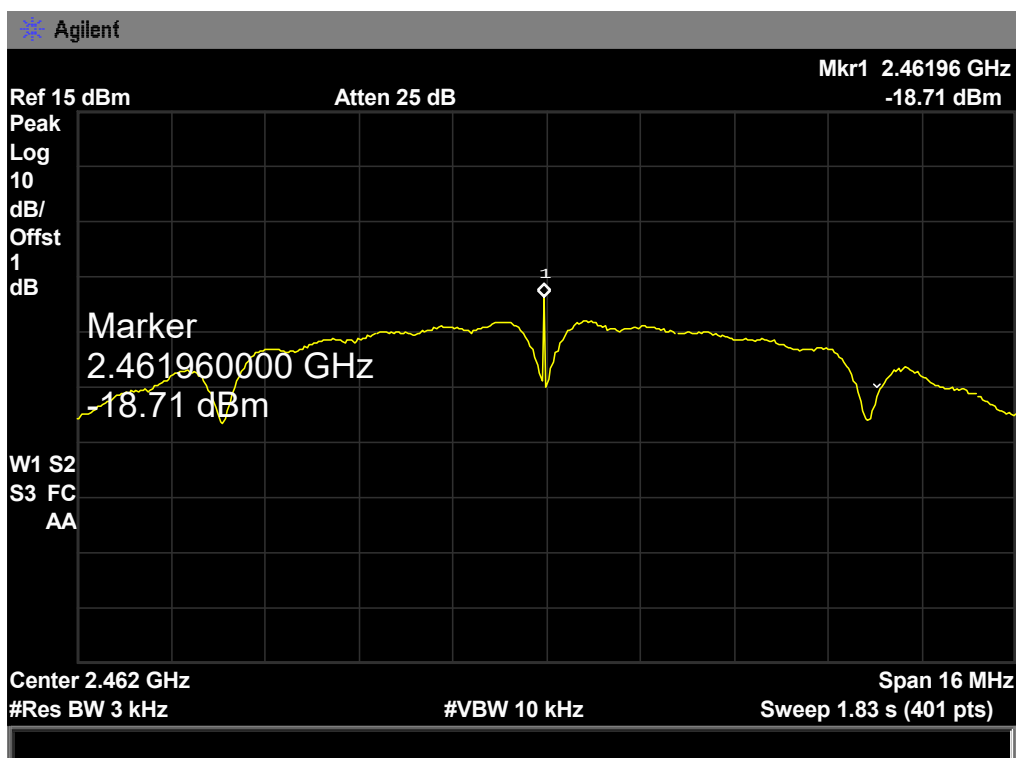
802.11B Mode

2437 MHz



802.11B Mode

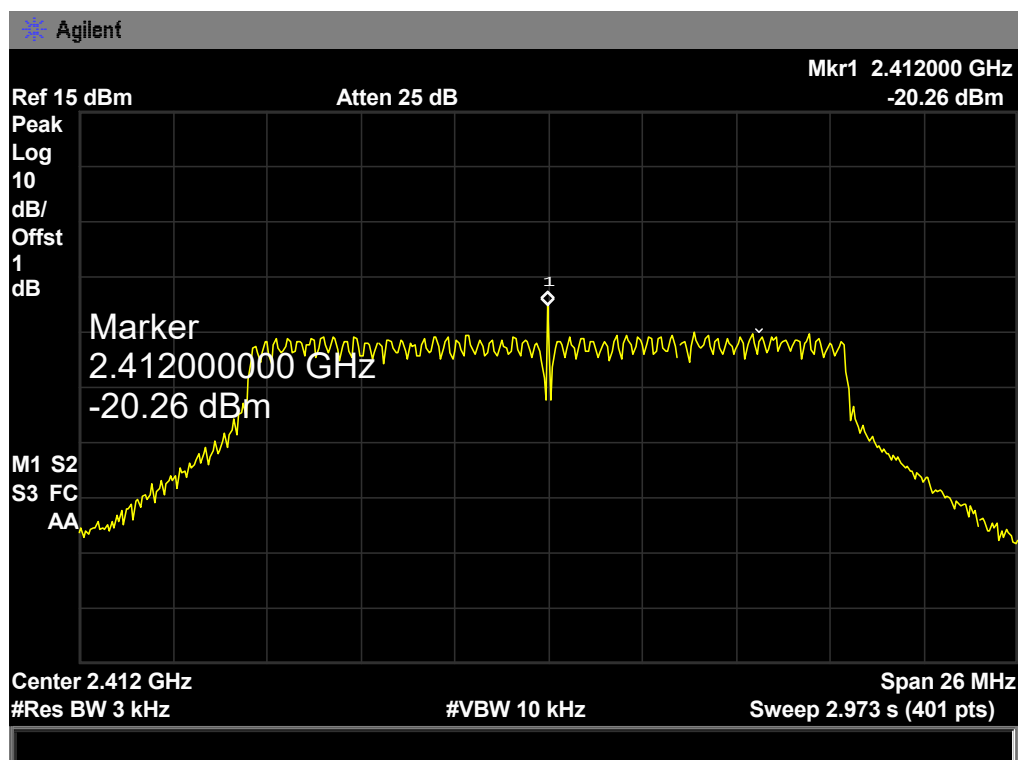
2462 MHz



EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Temperature:	25 °C
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11G Mode		
Channel Frequency (MHz)	Power Density (3 kHz/dBm)	Limit (dBm)	
2412	-20.26	8	
2437	-19.32		
2462	-18.83		

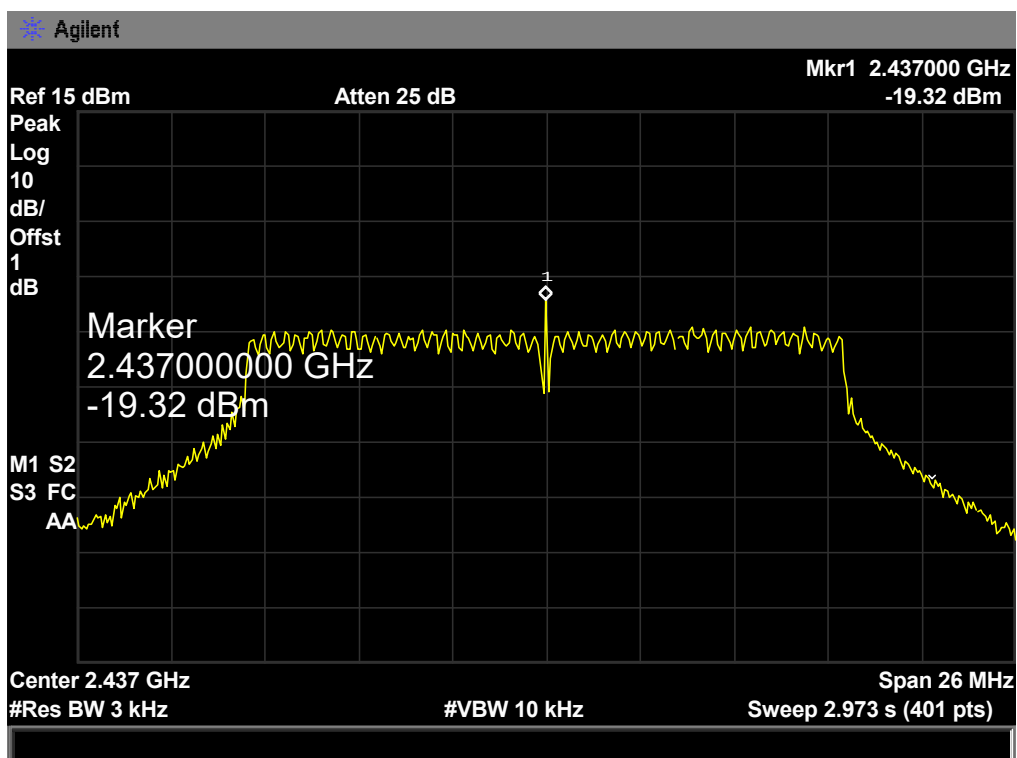
802.11G Mode

2412 MHz



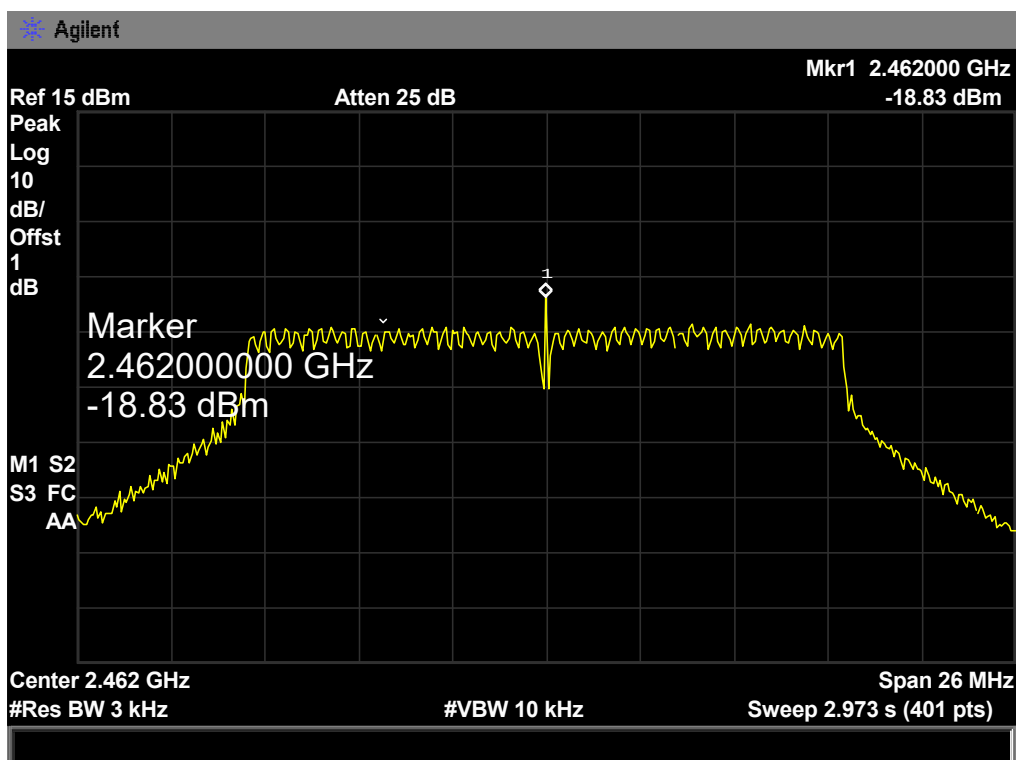
802.11G Mode

2437 MHz



802.11G Mode

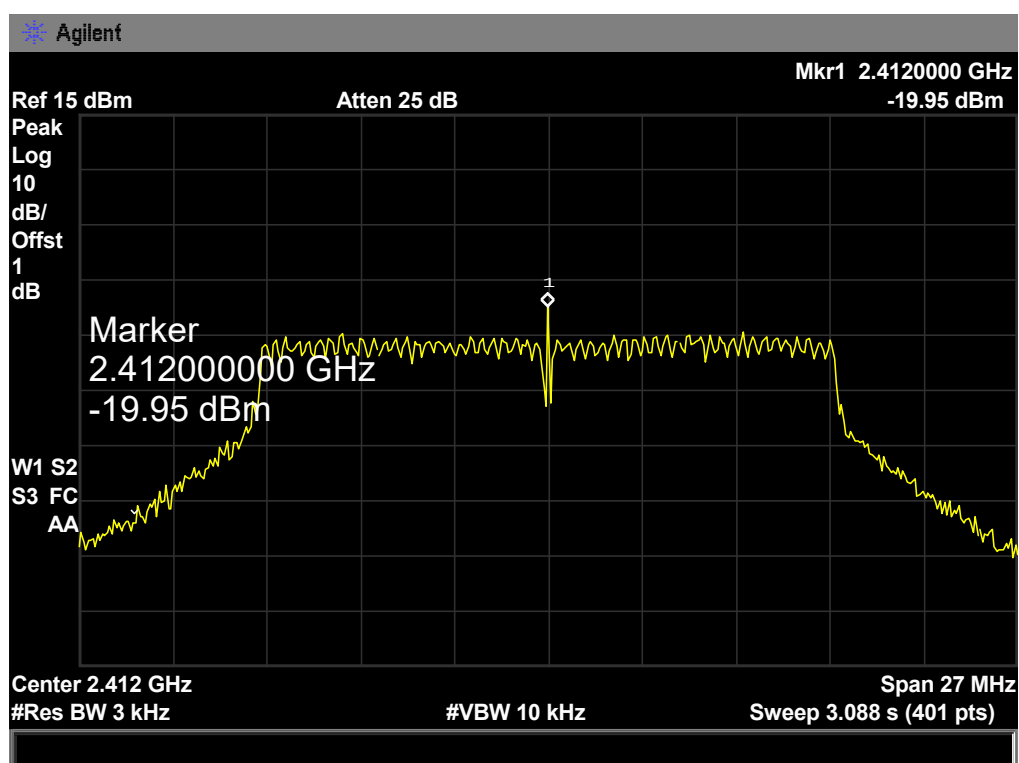
2462 MHz



EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Temperature:	25 °C
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11N(HT20) Mode		
Channel Frequency (MHz)	Power Density (3 kHz/dBm)	Limit (dBm)	
2412	-19.95	8	
2437	-19.24		
2462	-18.67		

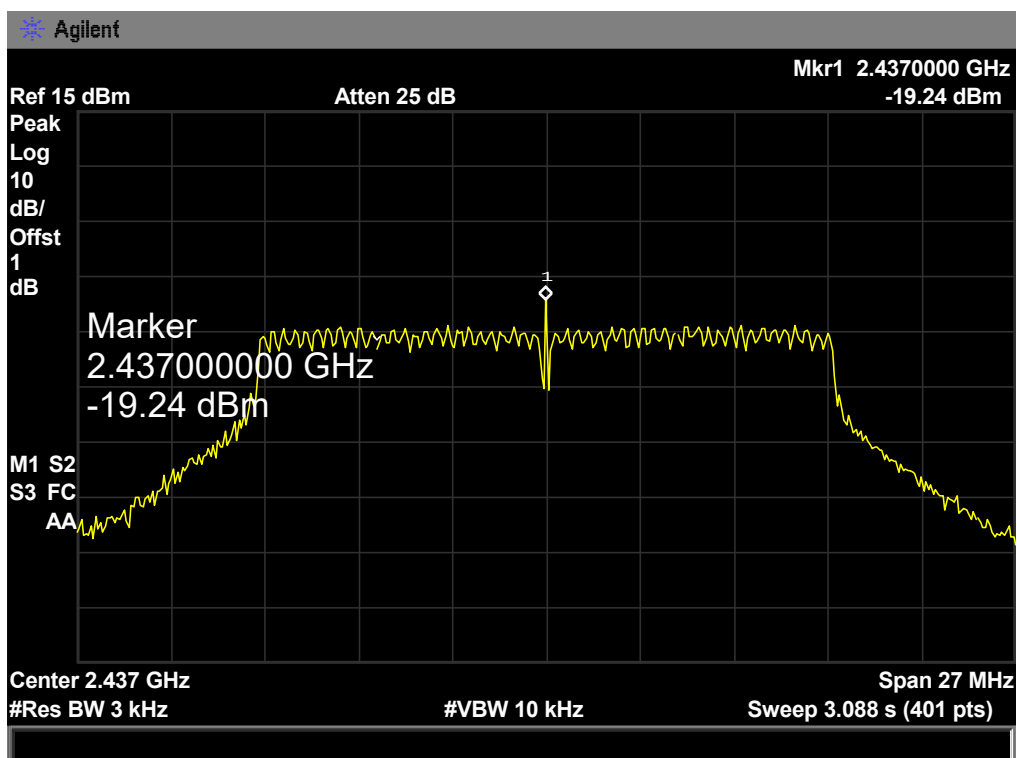
802.11N(HT20) Mode

2412 MHz



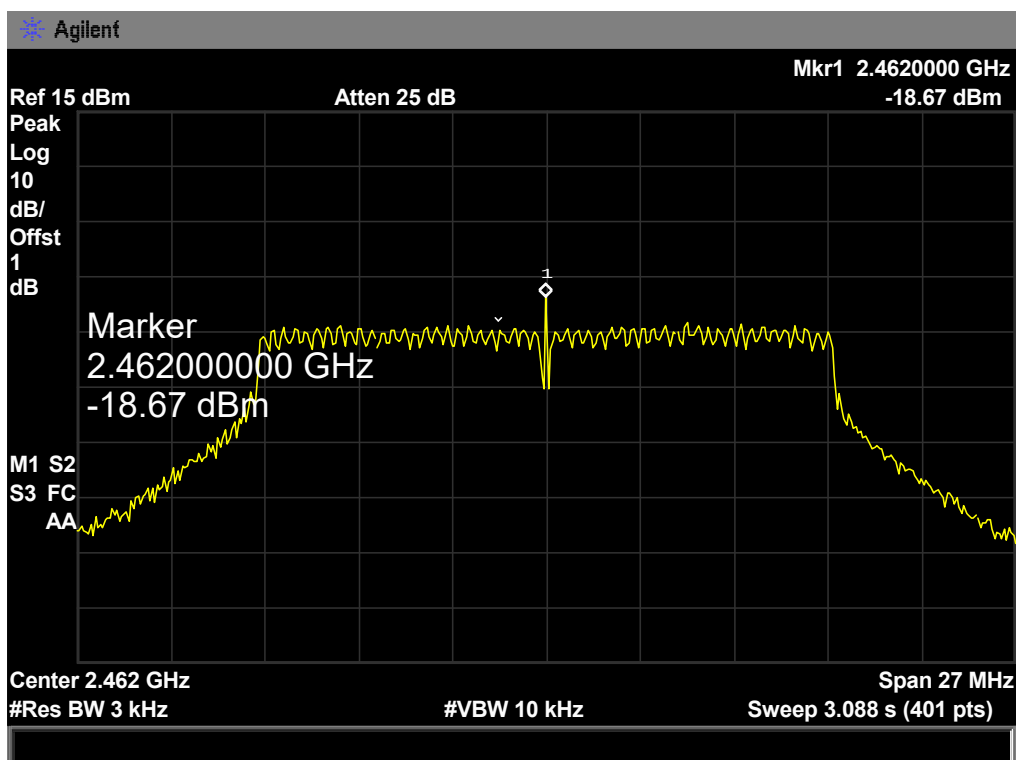
802.11N(HT20) Mode

2437 MHz



802.11N(HT20) Mode

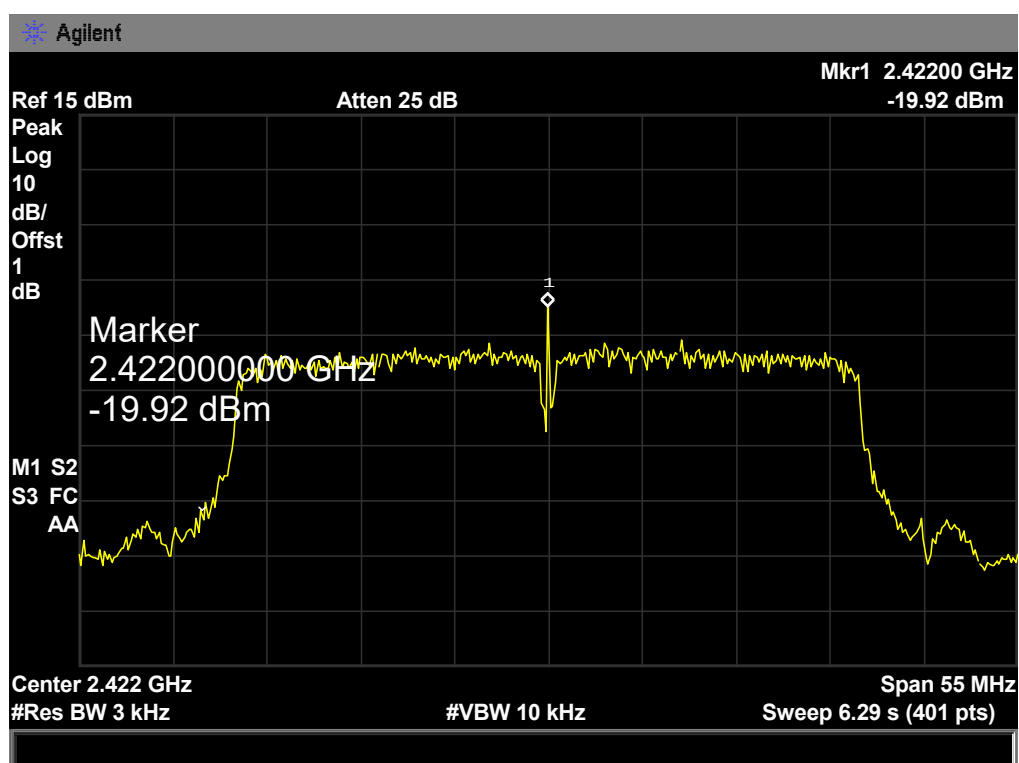
2462 MHz



EUT:	Pos terminal	Model:	IDT800
Temperature:	25 °C	Temperature:	25 °C
Test Voltage:	AC 120V/60Hz		
Test Mode:	TX 802.11N(HT40) Mode		
Channel Frequency (MHz)	Power Density (3 kHz/dBm)	Limit (dBm)	
2412	-19.92	8	
2437	-19.39		
2462	-19.00		

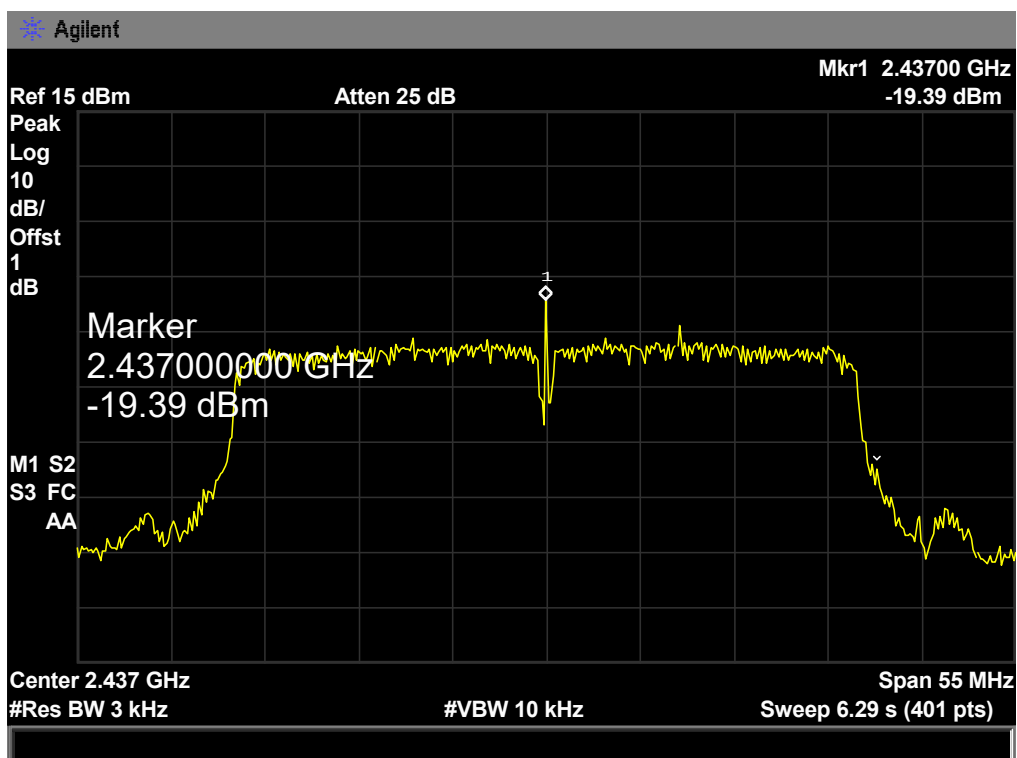
802.11N(HT40) Mode

2422 MHz



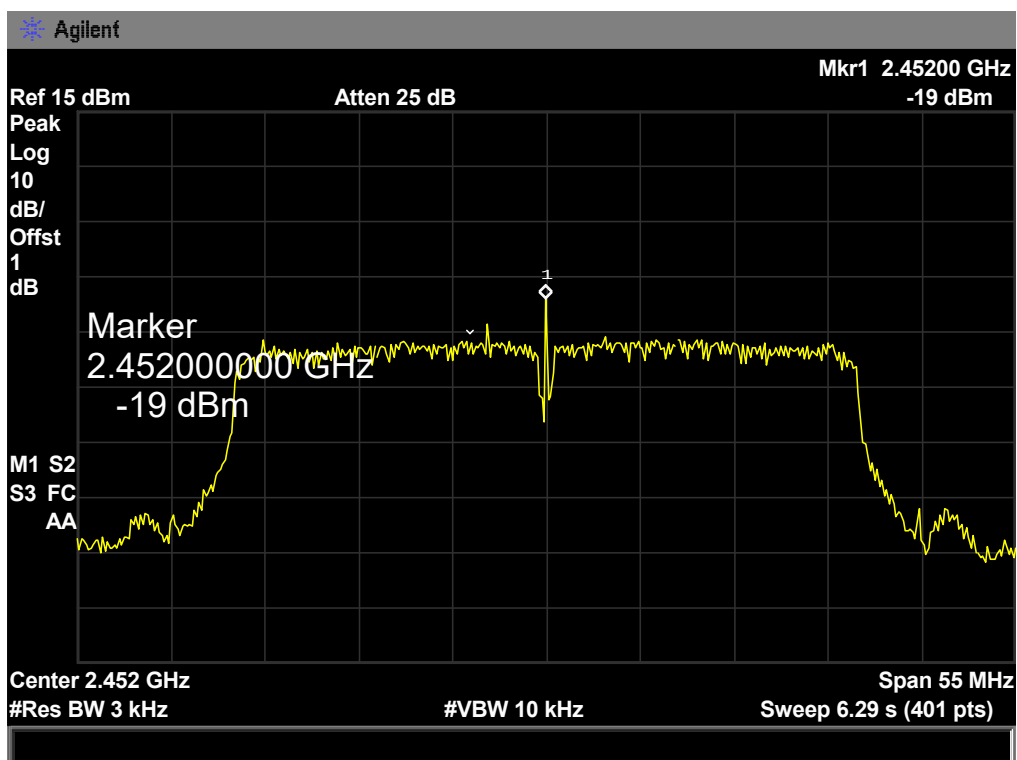
802.11N(HT40) Mode

2437 MHz



802.11N(HT40) Mode

2452 MHz



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 2 dBi, and the antenna de-signed with permanent attachment and no consideration of replacement. Please see the EUT photo for details.

10.3 Result

The EUT antenna is an internal antenna, the peak gain is 2dBi. It complies with the standard requirement.

