

FCC Radio Test Report

FCC ID:SGPM91001

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

Project No. : 1503C048
Equipment : Wireless Optical Mouse
Model Name : M910GB
Applicant : Shenzhen Delux Industry Co., Ltd.
Address : Delux Industrial Park NO.8.lan zhu road,shen zhen
Grand Industrial Zone.

Date of Receipt : Mar. 06, 2015
Date of Test : Mar. 06, 2015 ~ Mar. 17, 2015
Issued Date : Mar. 18, 2015
Tested by : BTL Inc.

Testing Engineer : David Mao
(David Mao)

Technical Manager : Leo Hung
(Leo Hung)

Authorized Signatory : Steven Lu
(Steven Lu)

B T L I N C .

No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan,
Guangdong, China.

TEL: +86-769-8318-3000 FAX: +86-769-8319-6000

Declaration

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

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Limitation

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

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REPORT ISSUED HISTORY

Issued No.	Description	Issued Date
BTL-FCCP-1-1503C048	Original Issue.	Mar. 18, 2015

1. CERTIFICATION

Equipment : Wireless Optical Mouse
Brand Name : Delux
Model Name. : M910GB
Applicant : Shenzhen Delux Industry Co., Ltd.
Manufacturer : Shenzhen Delux Industry Co., Ltd.
Address : Delux Industrial Park ,NO.8.lan zhu road,shen zhen Grand Industrial Zone
Factory : Shenzhen Delux Industry Co., Ltd.
Address : Delux Industrial Park ,NO.8.lan zhu road,shen zhen Grand Industrial Zone
Date of Test : Mar. 06, 2015~ Mar. 17, 2015
Test Sample : Engineering Sample
Standard(s) : FCC Part15, Subpart C: 2013(15.249)/ ANSI C63.4-2009

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-1-1503C048) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part15, Subpart C: 2013 (15.249)			
StandardSection	Test Item	Judgment	Remark
FCC			
15.203	Antenna Requirement	PASS	No antenna connector is used
15.207(a)	Conducted Emission	N/A	Note(1)
15.205	Restricted Band of Operation	PASS	Compliant
15.209 15.249(a)	Radiated Emissions	PASS	Compliant
15.215(c)	20dB Bandwidth Test	PASS	Compliant

NOTE:

(1) Due to this EUT is powered by batteries only, this test item is not applicable.

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **DG-CB03** at the location of No.3,Jinshagang 1st Road, Shixia, Dalang Town,Dongguan, Guangdong, China.523792
BTL's test firm number for FCC: 319330

2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

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 %.

A. Radiated Measurement :

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)	NOTE
DG-CB03	CISPR	9KHz~30MHz	V	3.79	
		9KHz~30MHz	H	3.57	
		30MHz ~ 200MHz	V	3.82	
		30MHz ~ 200MHz	H	3.60	
		200MHz ~ 1,000MHz	V	3.86	
		200MHz ~ 1,000MHz	H	3.94	
		1GHz~18GHz	V	3.12	
		1GHz~18GHz	H	3.68	
		18GHz~40GHz	V	4.15	
		18GHz~40GHz	H	4.14	

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless Optical Mouse	
Brand Name	Delux	
Model Name	M910GB	
Model Difference	N/A	
Product Description	Operation Frequency	2402-2480MHz
	Modulation Technology	GFSK(2Mbps)
	Data rate	
	Field Strength	83.73dBuV/m(peak Max)
Power Source	Supplied from 1*AAA battery	
Power Rating	DC 1.5V 10mA	

Note:

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

2. Channel List:

Channel	Frequency (MHz)
01	2402
02	2407
03	2414
04	2419
05	2422
06	2426
07	2436
08	2439
09	2441
10	2445
11	2453
12	2459
13	2463
14	2466
15	2473
16	2480

3. Table for Filed Antenna:

Ant.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)	Function
1	N/A	N/A	Printed	N/A	-1	TX/RX

3.2 DESCRIPTION OF TEST MODES

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

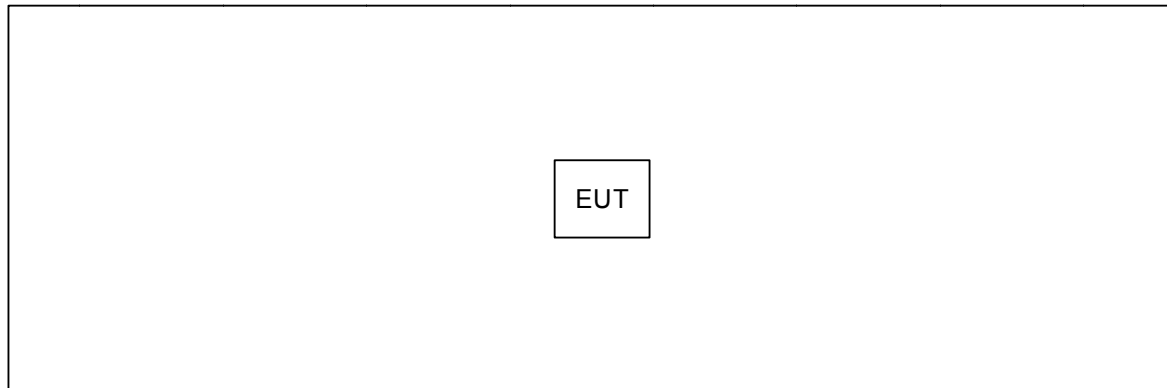
Pretest Mode	Description
Mode 1	TX Low Channel
Mode 2	TX Middle Channel
Mode 3	TX High Channel

For Radiated Test	
Final Test Mode	Description
Mode 1	TX Low Channel
Mode 2	TX Middle Channel
Mode 3	TX High Channel

Note:

(1) The measurements are performed at the high, middle, low available channels.

3.3 BLOCKDIAGRAMSHOWINGTHECONFIGURATIONOFSYSTEMTESTED



3.4 DESCRIPTION OF SUPPORT UNITS

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

Item	Equipment	Mfr/Brand	Model/Type No.	FCC ID	Series No.	Note
-	-	-	-	-	-	

Item	Shielded Type	Ferrite Core	Length	Note
-	-	-	-	

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION (FREQUENCY RANGE 150KHZ-30MHZ)

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15 -0.5	66 to 56*	56 to 46*
0.50 -5.0	56	46
5.0 -30.0	60	50

Note:

- (1) The limit of " * " decreases with the logarithm of the frequency
- (2) The test result calculated as following:
 Measurement Value = Reading Level + Correct Factor
 Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)
 Margin Level = Measurement Value - Limit Value

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

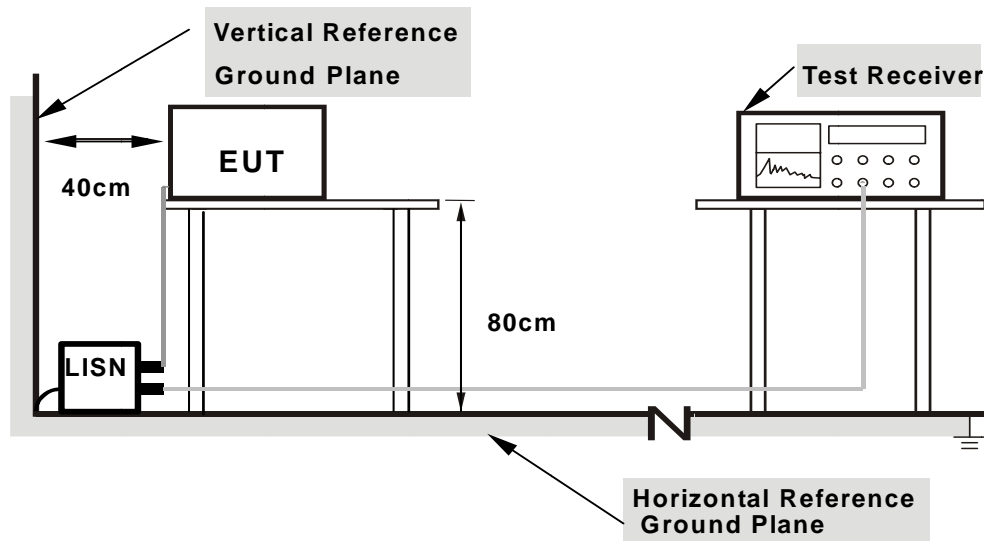
4.1.2 TESTPROCEDURE

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

4.1.3 DEVIATION FROM TEST STANDARD

No deviation

4.1.4 TESTSETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

4.1.5EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it).The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

The EUT was programmed to be in continuously transmitting mode.

4.1.6EUT TEST CONDITIONS

Temperature: N/A

Relative Humidity: N/A

Test Voltage: N/A

4.1.7 TEST RESULTS

N/A

Remark:

- (1) All readings are QP Mode value unless otherwise stated AVG in column of 'Note'. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits,the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform in this case, a "*" marked in AVG Mode column of Interference Voltage Measured.
- (2) Measuring frequency range from 150KHz to 30MHz.

4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS (FCC 15.209)

Frequencies (MHz)	Field Strength (microvolts/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
960~1000	500	3

Harmonic emissions limits comply with below 54dBuV/m at 3m. Other emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or comply with the radiated emissions limits specified in section 15.209(a) limit in the table below has to be followed.

Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m) = 20log Emission level (uV/m).
- (3) The test result calculated as following:
 Measurement Value = Reading Level + Correct Factor
 Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use)
 Margin Level = Measurement Value - Limit Value

LIMITS OF RADIATED EMISSION MEASUREMENT (FCC 15.209)

FREQUENCY (MHz)	(dBuV/m) (at 3m)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m) = 20log Emission level (uV/m).

LIMITS OF RADIATED EMISSION MEASUREMENT (FCC Part 15.249)

FCC Part 15 (15.249), Subpart C	
Limit	Frequency Range (MHz)
Field strength of fundamental 50000 μ V/m (94 dB μ V/m) @ 3 m	2400-2483.5
Field strength of harmonics 500 μ V/m (54 dB μ V/m) @ 3 m	Above 2483.5

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz for PK/AVG detector
Start ~ Stop Frequency	90kHz~110kHz for QP detector
Start ~ Stop Frequency	110kHz~490kHz for PK/AVG detector
Start ~ Stop Frequency	490kHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

Duty cycle: TX 2402MHz

Duty cycle = $T_{ON} / (T_{ON} + T_{OFF})$

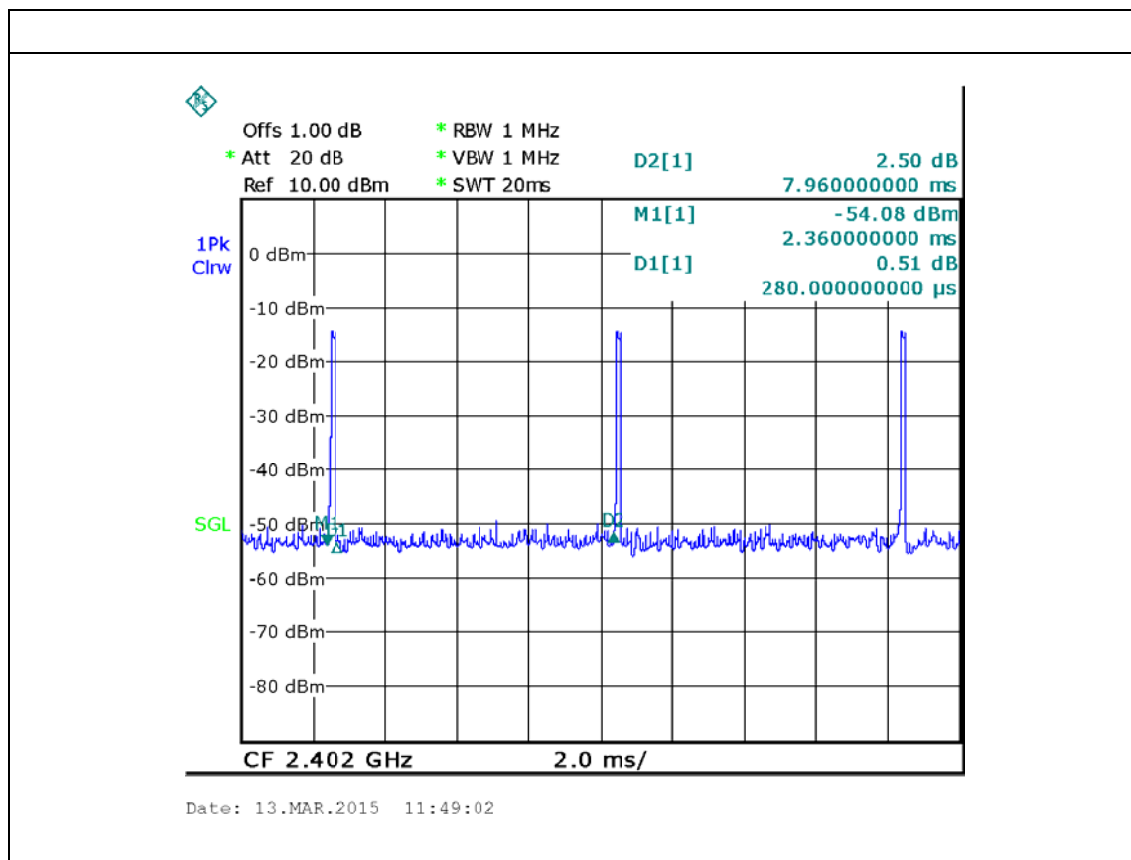
T_{ON} : 0.28msec

$T_{ON} + T_{OFF}$: (total time):7.96 msec

Duty cycle: 3.518%

$AV = PK + 20 \log(\text{Duty cycle})$

$AV = PK - 29.075$



4.2.2 TESTPROCEDURE

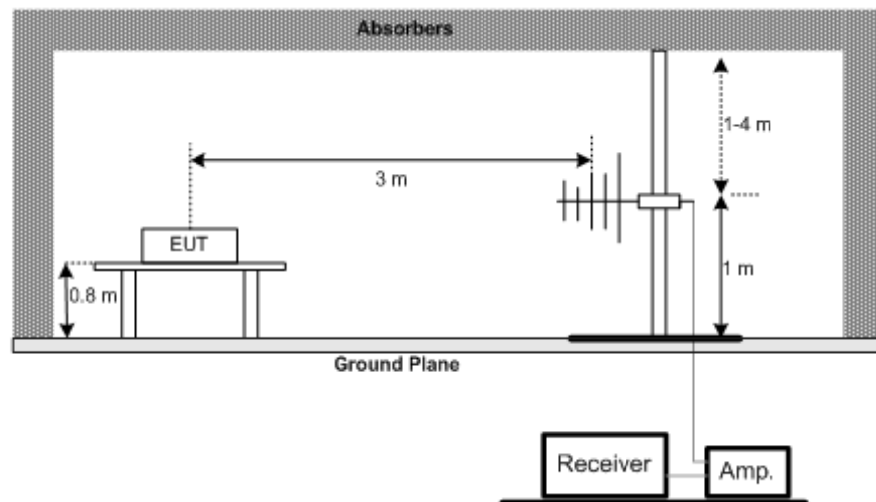
- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then AV detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.
- g. The average value of fundamental frequency is:
Average = Peak value + $20\log(\text{Duty cycle})$,Final AV=PK-29.075

4.2.3 DEVIATIONFROMTESTSTANDARD

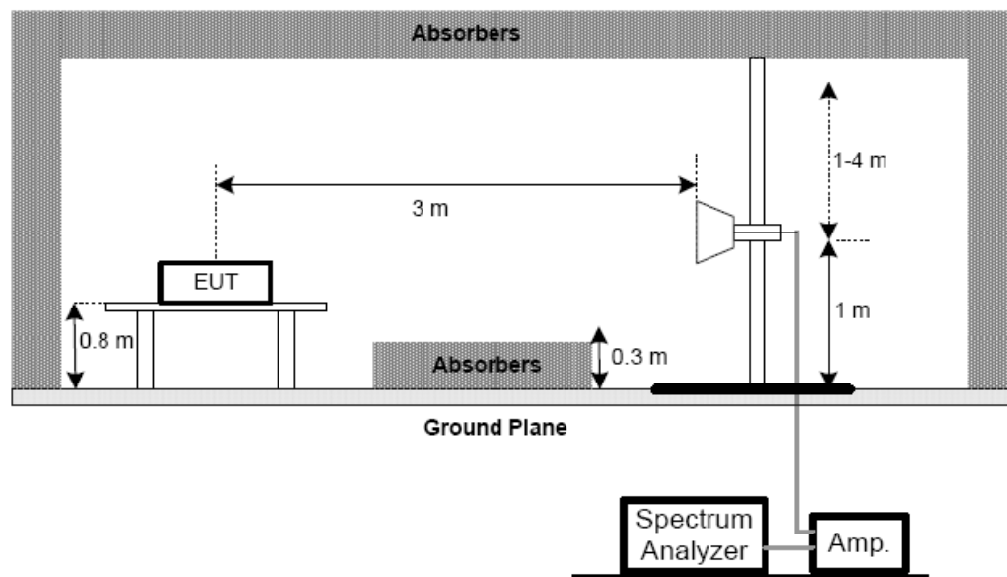
No deviation

4.2.4 TESTSETUP

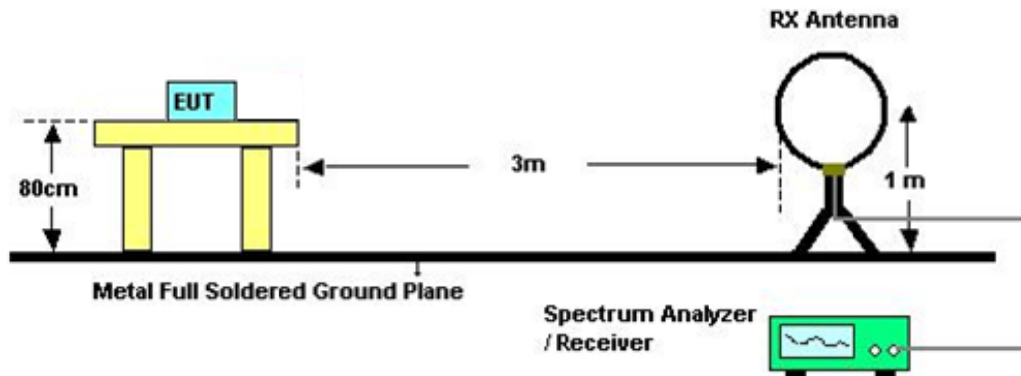
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(B) Radiated Emission Test Set-Up Frequency Above 1 GHz



(C) Radiated emissions below 30MHz



4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

4.2.6 EUT TEST CONDITIONS

Temperature: 25°C

Relative Humidity: 55%

Test Voltage: DC 1.5V

4.2.7 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Attachment A

Remark:

- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
- (2) Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB).
- (3) Limit line = specific limits (dBUV) + distance extrapolation factor.

4.2.8 TEST RESULTS (BETWEEN 30 – 1000 MHz)

Please refer to the Attachment B

Remark :

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (3) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission .

4.2.9 TEST RESULTS(ABOVE1000 MHz)

Please refer to the Attachment C

Remark :

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』 . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.
- (2) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission .
- (3) Data of measurement within this frequency range shown “ * ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (4) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (5) EUT Orthogonal Axis :
“X” - denotes Laid on Table ; “Y” - denotes Vertical Stand ; “Z” - denotes Side Stand
- (6) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna
- (7) No limit: This is fundamental signal, the judgment is not applicable.
For fundamental signal judgment was referred to Peak output test.

5.BANDWIDTH TEST

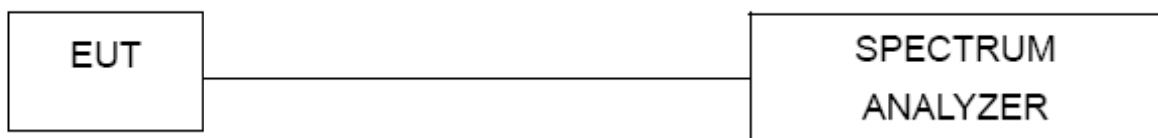
5.1TEST PROCEDURE

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

5.2DEVIATION FROM STANDARD

No deviation.

5.3TEST SETUP



5.4EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 Unless otherwise a special operating condition is specified in the follows during the testing.

5.5EUT TEST CONDITIONS

Temperature: 25°C
Relative Humidity: 55%
Test Voltage: DC 1.5V

5.6 TEST RESULTS

Please refer to the Attachment D

6.MEASUREMENT INSTRUMENTS LIST AND SETTING

Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarbeck	VULB9160	9160-3232	Mar. 29, 2015
2	Amplifier	HP	8447D	2944A09673	Mar. 29, 2015
3	Receiver	AGILENT	N9038A	MY52130039	Sep. 30, 2015
4	Test Cable	N/A	C-01_CB03	N/A	Jul. 01, 2015
5	Controller	CT	SC100	N/A	N/A
6	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
7	Antenna	ETS	3115	00075789	Mar. 29, 2015
8	Amplifier	Agilent	8449B	3008A02274	Mar. 29, 2015
9	Receiver	AGILENT	N9038A	MY52130039	Sep. 30, 2015
10	Test Cable	HUBER+SUHNER	C-48	N/A	Apr. 30, 2015
11	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Feb. 21, 2016
12	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Feb. 21, 2016
13	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Mar. 29, 2015
14	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A

Bandwidth					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 10, 2015

Remark: "N/A" denotes no model name, serial no. or calibration specified.
All calibration period of equipment list is one year.

7.EUT TEST PHOTO

Radiated Measurement Photos 9KHz to 30MHz



Radiated Measurement Photos
30MHz to 1000MHz



Radiated Measurement Photos

Above 1000MHz



ATTACHMENT A - RADIATED EMISSION (9KHZ-30MHZ)

Test Mode: TX Mode

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Note
0.0168	0°	13.61	24.30	37.91	123.10	-85.19	AVG
0.0168	0°	14.52	24.30	38.82	143.10	-104.28	PEAK
0.0353	0°	6.77	23.33	30.10	116.65	-86.55	AVG
0.0353	0°	7.55	23.33	30.88	136.65	-105.77	PEAK
0.0382	0°	3.71	23.15	26.86	115.96	-89.11	AVG
0.0382	0°	5.34	23.15	28.49	135.96	-107.48	PEAK
0.0466	0°	0.92	22.62	23.54	114.24	-90.70	AVG
0.0466	0°	2.89	22.62	25.51	134.24	-108.73	PEAK
2.0651	0°	30.64	19.46	50.10	69.54	-19.44	QP
3.3674	0°	21.69	18.94	40.63	69.54	-28.91	QP

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Note
0.0154	90°	13.31	24.30	37.61	123.85	-86.24	AVG
0.0154	90°	14.29	24.30	38.59	143.85	-105.26	PEAK
0.0353	90°	6.34	23.33	29.67	116.65	-86.98	AVG
0.0353	90°	8.72	23.33	32.05	136.65	-104.60	PEAK
0.0376	90°	3.43	23.19	26.62	116.10	-89.49	AVG
0.0376	90°	5.36	23.19	28.55	136.10	-107.56	PEAK
0.0675	90°	0.64	22.05	22.69	111.02	-88.33	AVG
0.0675	90°	2.76	22.05	24.81	131.02	-106.21	PEAK
2.0564	90°	30.68	19.47	50.15	69.54	-19.39	QP
3.2479	90°	21.47	18.92	40.39	69.54	-29.15	QP

ATTACHMENT B -RADIATED EMISSION (30MHZ TO 1000MHZ)

Test Mode: TX Middle Channel

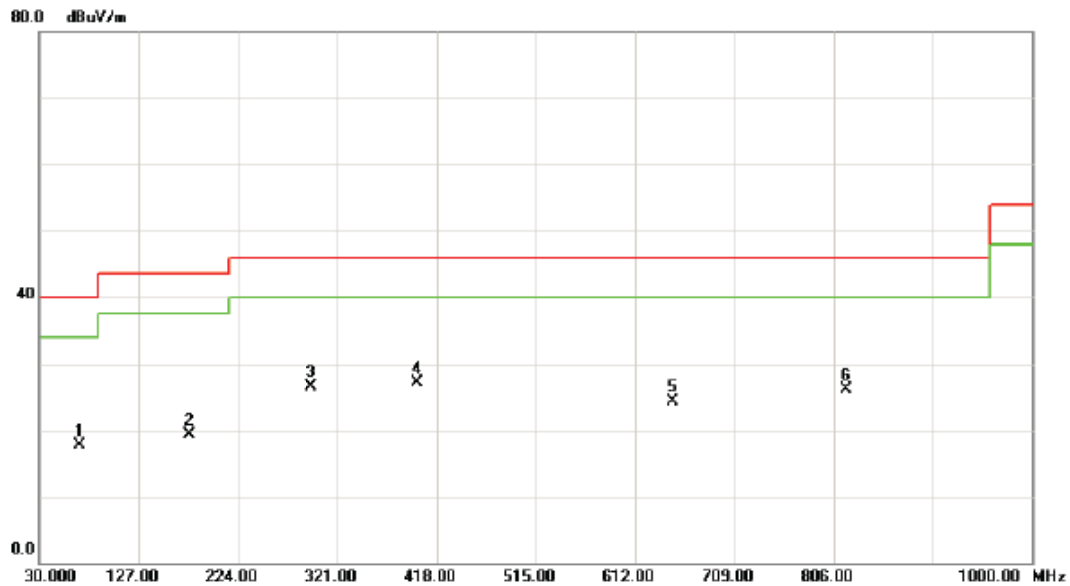
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	68.8000	38.79	-16.08	22.71	40.00	-17.29	peak	
2		183.2600	30.38	-13.44	16.94	43.50	-26.56	peak	
3		399.5700	30.85	-9.55	21.30	46.00	-24.70	peak	
4		576.1100	29.35	-7.92	21.43	46.00	-24.57	peak	
5		717.7300	30.05	-4.81	25.24	46.00	-20.76	peak	
6		801.1500	29.90	-2.90	27.00	46.00	-19.00	peak	

Test Mode: TX Middle Channel

Horizontal

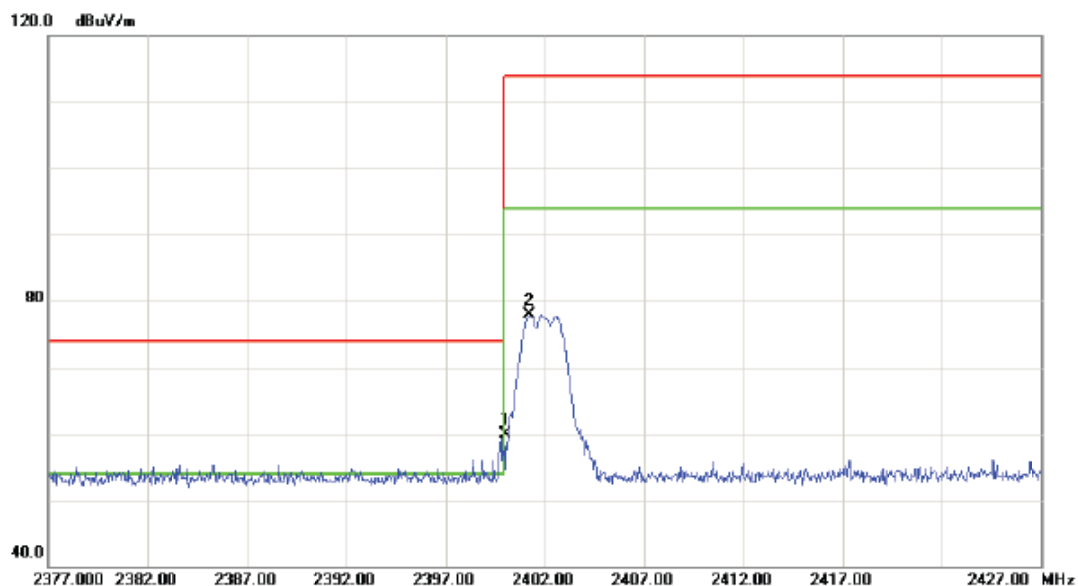


No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	69.7700	33.91	-16.22	17.69	40.00	-22.31	peak	
2	176.4700	32.28	-12.90	19.38	43.50	-24.12	peak	
3	295.7800	37.50	-11.07	26.43	46.00	-19.57	peak	
4 *	399.5700	36.62	-9.55	27.07	46.00	-18.93	peak	
5	648.8600	29.45	-5.21	24.24	46.00	-21.76	peak	
6	817.6400	29.15	-2.98	26.17	46.00	-19.83	peak	

ATTACHMENT C -RADIATED EMISSION (ABOVE 1000MHZ)

Orthogonal Axis :	X
Test Mode :	TX Low Channel

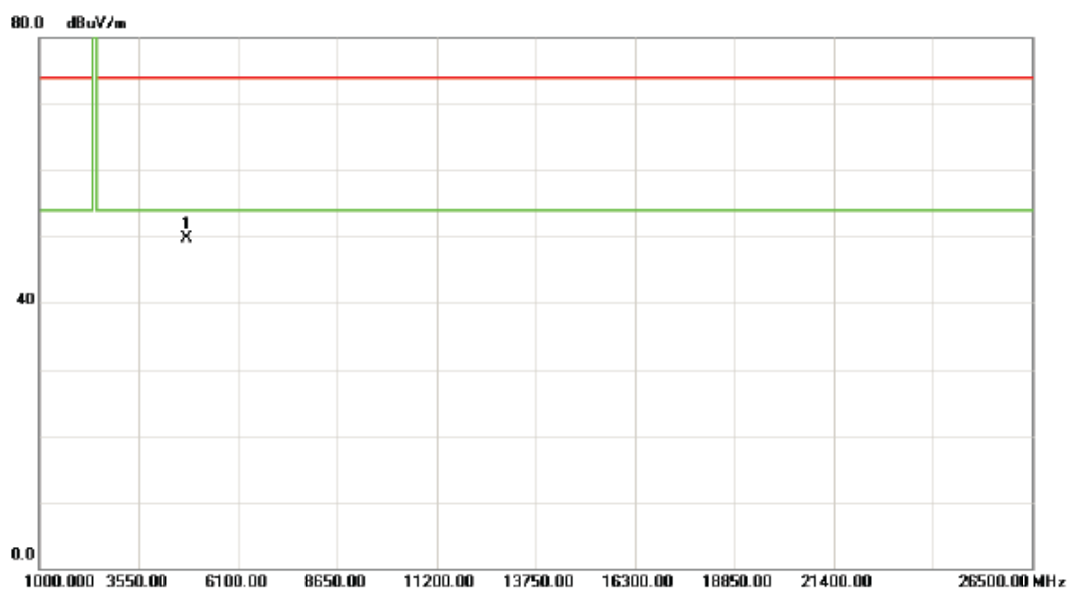
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	2400.000	27.99	31.89	59.88	74.00	-14.12	peak	
2		2401.250	45.97	31.89	77.86	114.00	-36.14	peak	

Orthogonal Axis :	X
Test Mode :	TX Low Channel

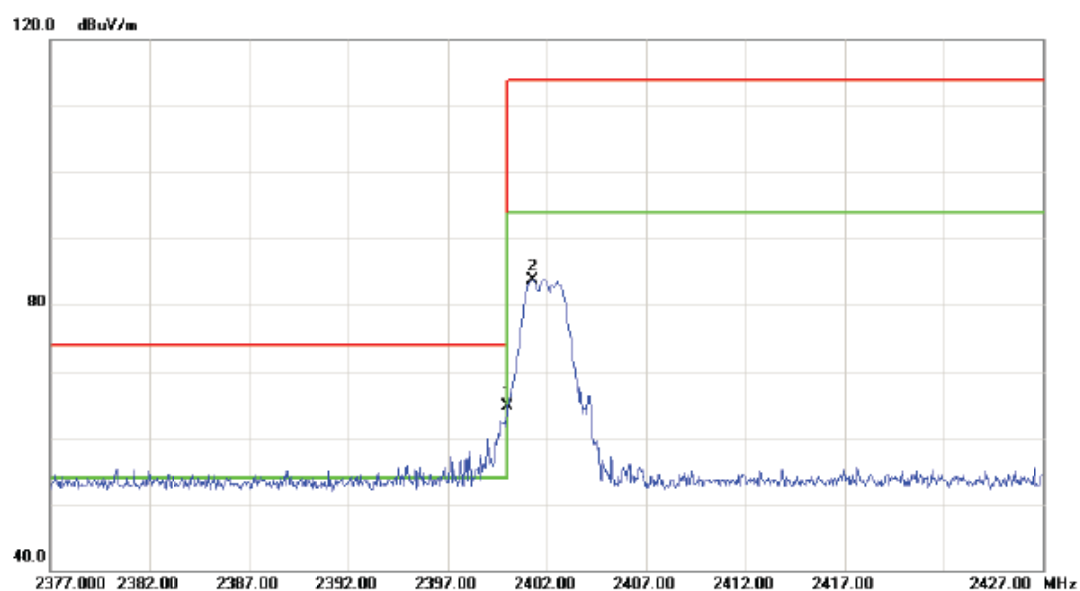
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4805.120	46.13	3.58	49.71	74.00	-24.29	peak	

Orthogonal Axis :	X
Test Mode :	TX Low Channel

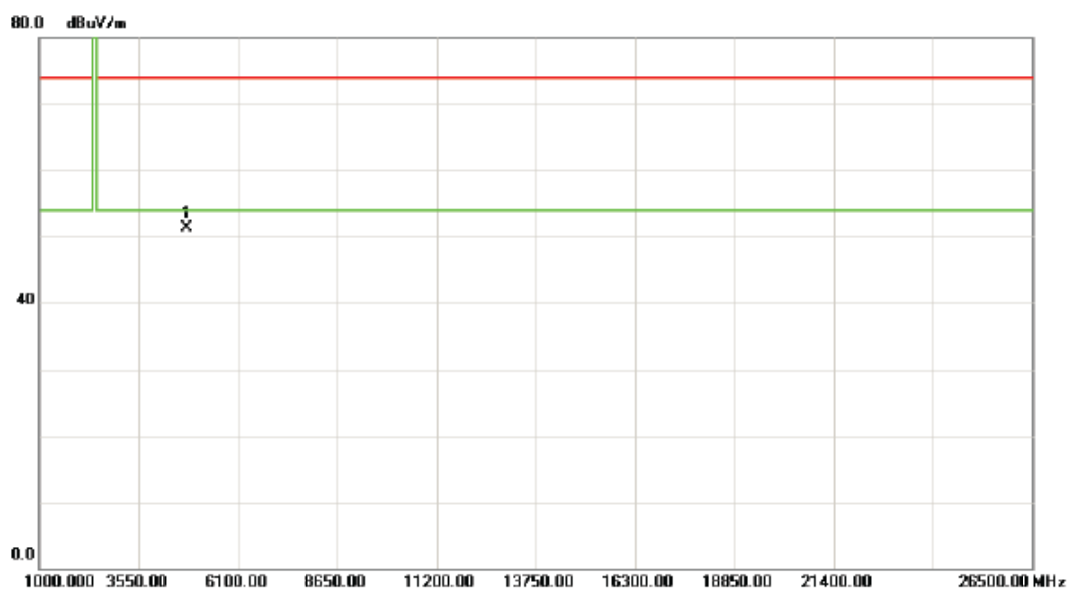
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2400.000	32.84	31.89	64.73	74.00	-9.27	peak	
2		2401.300	51.84	31.89	83.73	114.00	-30.27	peak	

Orthogonal Axis :	X
Test Mode :	TX Low Channel

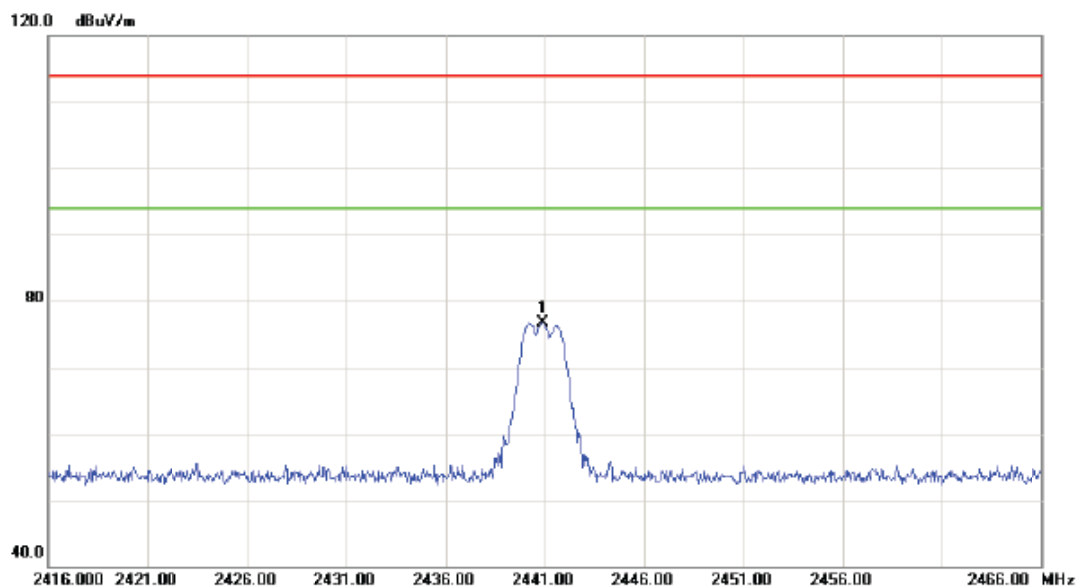
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4803.700	47.65	3.58	51.23	74.00	-22.77	peak	

Orthogonal Axis :	X
Test Mode :	TX Middle Channel

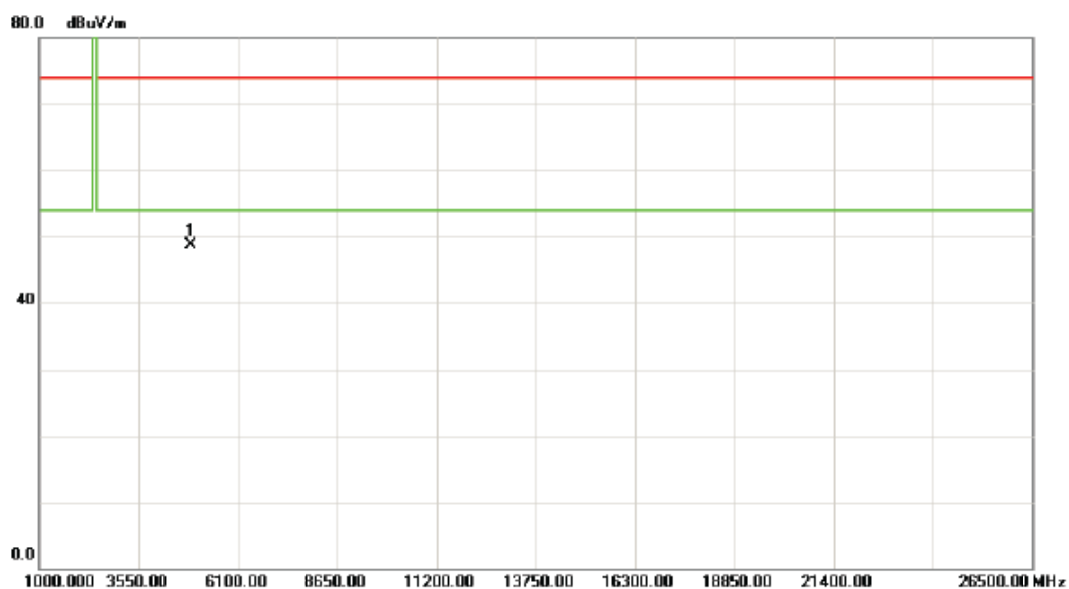
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2440.900	44.73	31.95	76.68	114.00	-37.32	peak	

Orthogonal Axis :	X
Test Mode :	TX Middle Channel

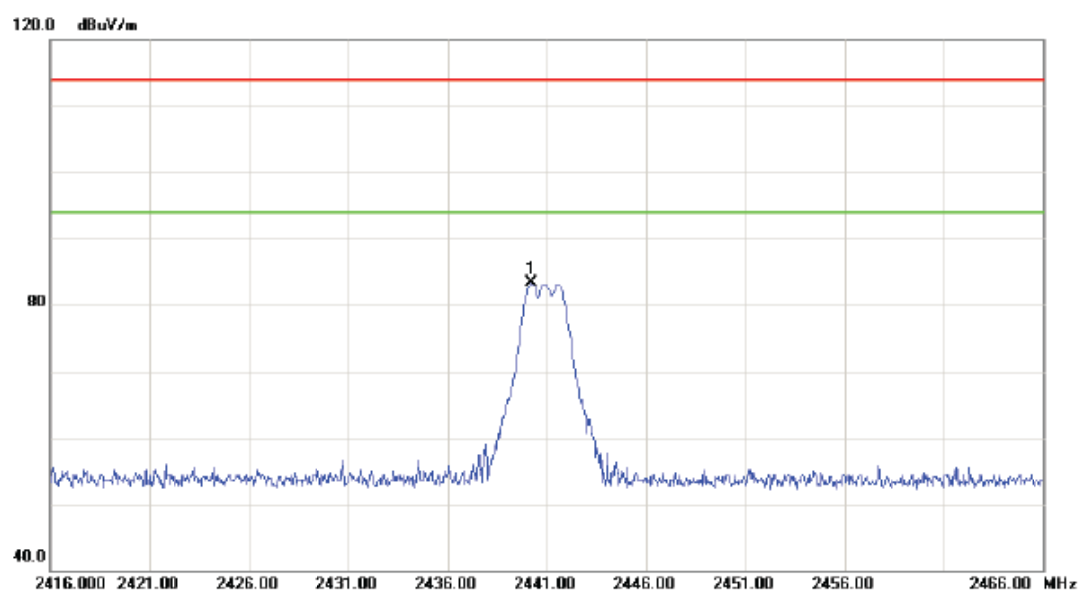
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4881.760	44.99	3.73	48.72	74.00	-25.28	peak	

Orthogonal Axis :	X
Test Mode :	TX Middle Channel

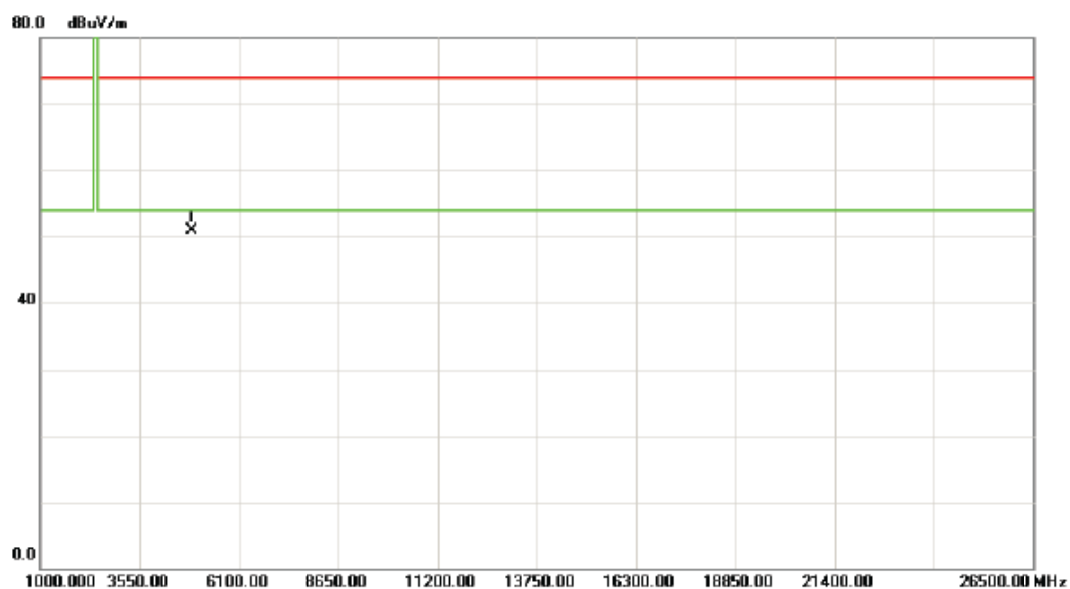
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2440.250	51.28	31.95	83.23	114.00	-30.77	peak	

Orthogonal Axis :	X
Test Mode :	TX Middle Channel

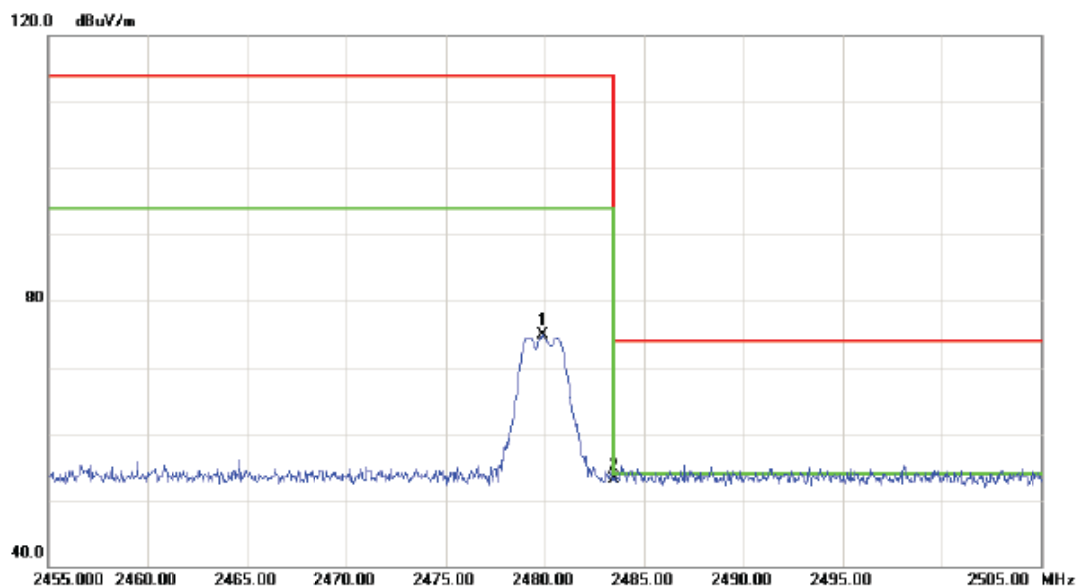
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4883.120	47.12	3.73	50.85	74.00	-23.15	peak	

Orthogonal Axis :	X
Test Mode :	TX High Channel

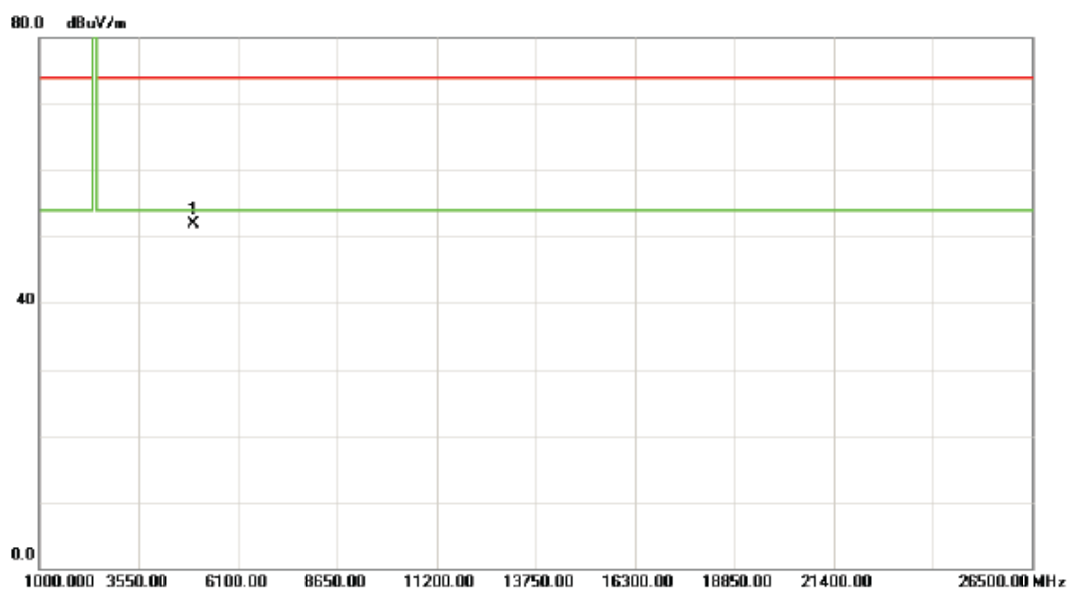
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2479.900	42.86	32.00	74.86	114.00	-39.14	peak	
2	*	2483.500	21.12	32.01	53.13	74.00	-20.87	peak	

Orthogonal Axis :	X
Test Mode :	TX High Channel

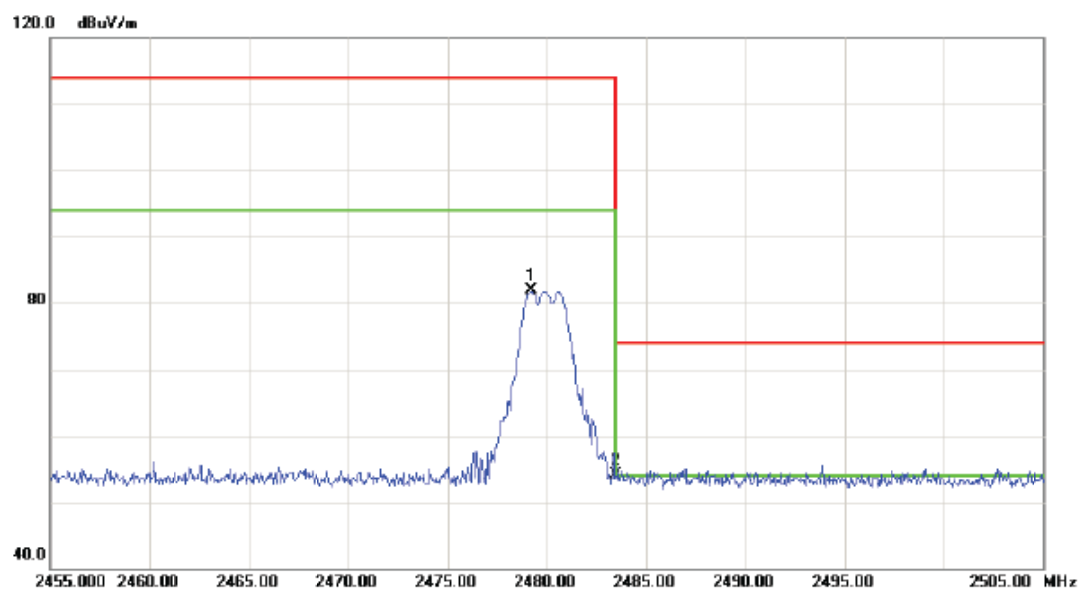
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4959.640	47.96	3.88	51.84	74.00	-22.16	peak	

Orthogonal Axis :	X
Test Mode :	TX High Channel

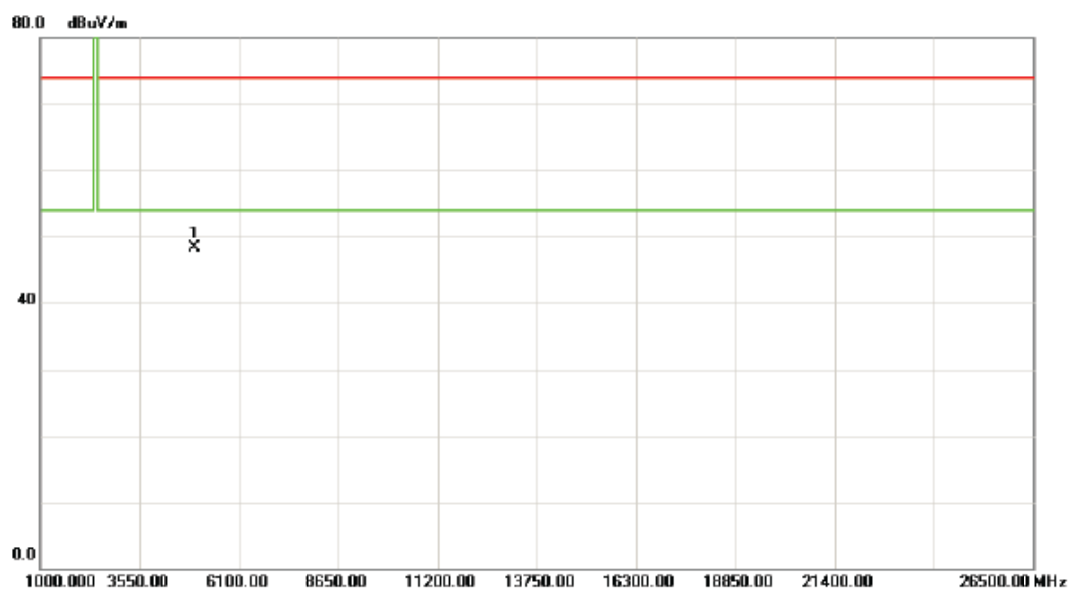
Horizontal



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1		2479.250	49.84	32.00	81.84	114.00	-32.16	peak	
2	*	2483.500	22.13	32.01	54.14	74.00	-19.86	peak	

Orthogonal Axis :	X
Test Mode :	TX High Channel

Horizontal

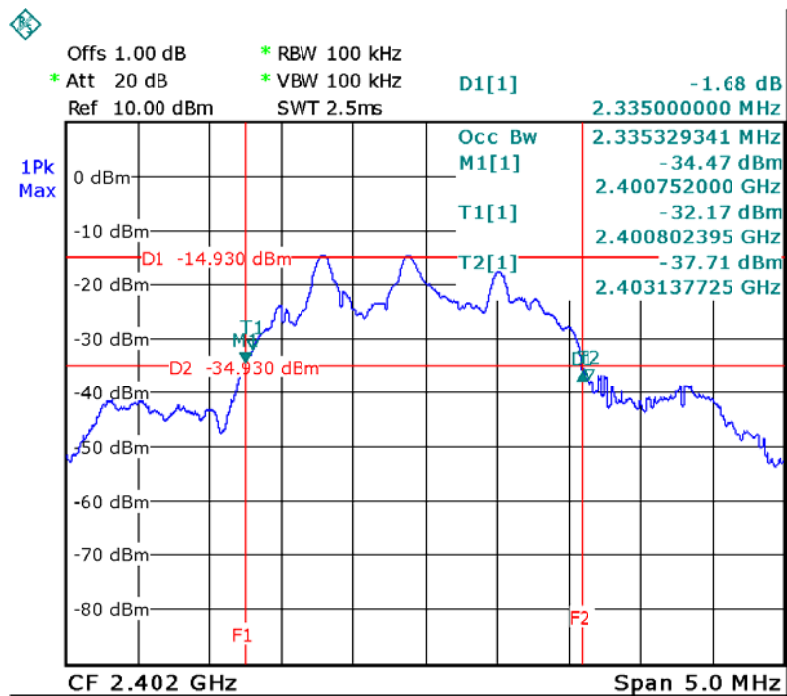


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4958.640	44.45	3.87	48.32	74.00	-25.68	peak	

ATTACHMENT D - BANDWIDTH

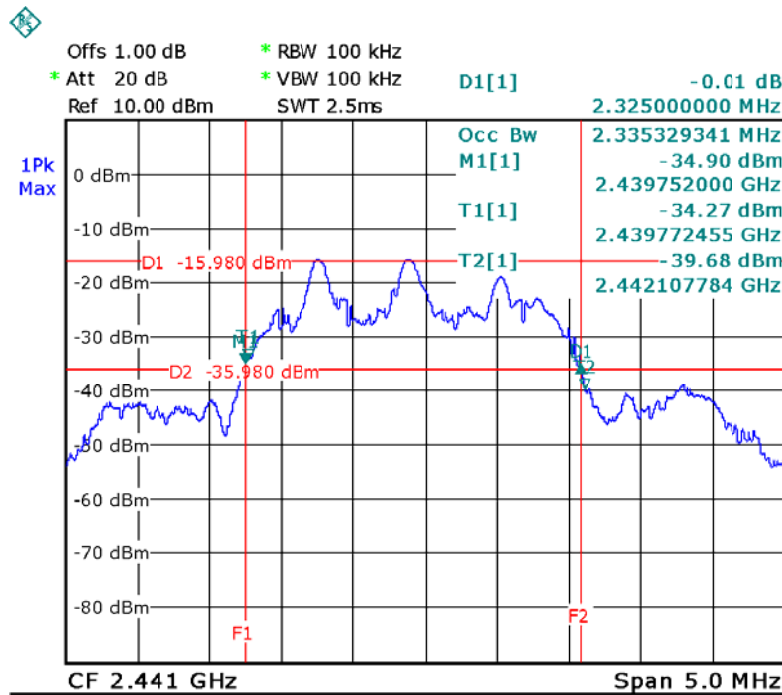
Frequency (MHz)	20dB Bandwidth (MHz)	99% Occupied BW (MHz)
2402	2.34	2.34
2441	2.33	2.34
2480	2.39	2.53

TX Low Channel



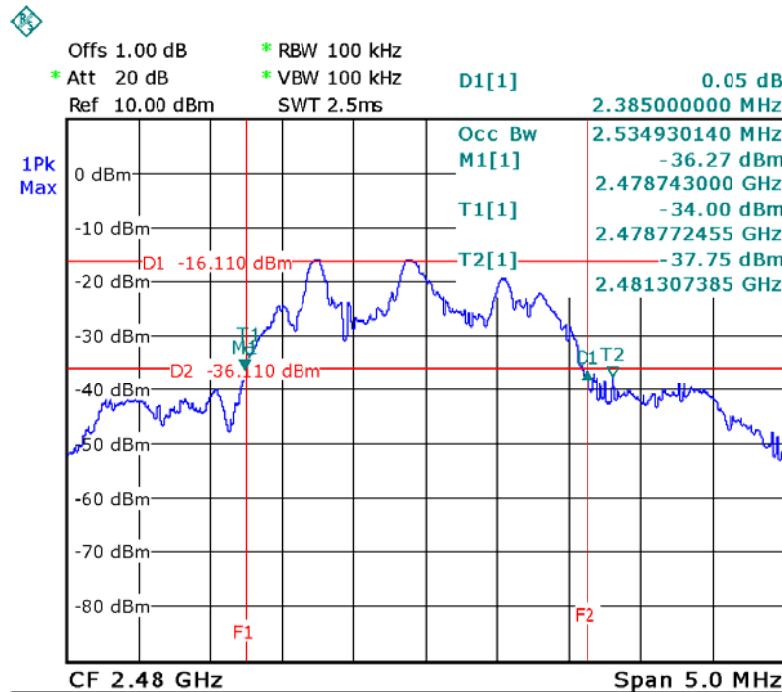
Date: 13.MAR.2015 12:53:20

TX Middle Channel



Date: 13.MAR.2015 12:56:25

TX High Channel



Date: 13.MAR.2015 12:58:52