FCC Radio Test Report

FCC ID: RWO-RC30012302

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

Project No.	:	1407C254
Equipment	:	CHARGING DOCK
Model Name	:	RC30-012302
Applicant	:	Razer Inc.
Address	:	2035 Corte Del Nogal, Suite 101. Carlsbad California 92011. USA

Date of Receipt	:	Jul. 31, 2014
Date of Test	:	Jul. 31, 2014~ Aug. 19, 2014
Issued Date	:	Aug. 20, 2014
Tested by	:	BTL Inc.

Testing Engineer : David Mao
(David Mao)

Technical Manager : Leo Hung
(Leo Hung)

Authorized Signatory : Steven Lu
(Steven Lu)

BTL INC.

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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-1-1407C254	Original Issue.	Aug. 20, 2014

1. CERTIFICATION

Equipment	:	CHARGING DOCK
Brand Name	:	RAZER
Model Name	:	RC30-012302
Applicant	:	Razer Inc.
Manufacturer	:	Razer (Asia-Pacific) Pte Ltd
Address	:	514 Chai Chee Lane #07-01 ~ 06 Singapore 469029
Factory	:	RAZER TECHNOLOGY AND DEVELOPMENT (SHENZHEN) CO., LTD
Address	:	East Wing, 3rd Floor, Block 2, Phase 1 of Vision Shenzhen Business Park Keji South Road, Hi-Tech Industrial Park, Shenzhen 518057, China
Date of Test	:	Jul. 31, 2014~ Aug. 19, 2014
Test Sample	:	Engineering Sample
Standard(s)	:	FCC Part15, Subpart C(15.249)/ ANSI C63.4-2009 RSS-GEN Issue 3, Dec 2010

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-1-1407C254) 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 (15.249)			
StandardSection	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	
15.209 15.249	Radiated Spurious Emission	PASS	

NOTE:

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

2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **DG-C02/DG-CB03** at the location of No.3,Jinshagang 1st Road, ShiXia, Dalang Town,Dong Guan, 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 ± U,where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2,providing a level of confidence of approximately 95 %.

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U，(dB)	NOTE
DG-C02	CISPR	150 KHz ~ 30MHz	3.4	

B. 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	CHARGING DOCK	
Brand Name	RAZER	
Model Name	RC30-012302	
Model Difference	N/A	
Product Description	Operation Frequency	2402~2480 MHz
	Modulation Technology	GFSK(1Mbps)
	Data rate	
	Field Strength	89.05dBuV/m(AV Max)
Power Source	Supplier from USB Port	
Power Rating	DC 5V 500mA	
Connecting I/O Port(s)	Please refer to the User's Manual	

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)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	**2402**	28	2429	55	2456
02	2403	29	2430	56	2457
03	2404	30	2431	57	2458
04	2405	31	2432	58	2459
05	2406	32	2433	59	2460
06	2407	33	2434	60	2461
07	2408	34	2435	61	2462
08	2409	35	2436	62	2463
09	2410	36	2437	63	2464
10	2411	37	2438	64	2465
11	2412	38	2439	65	2466
12	2413	39	2440	66	2467
13	2414	40	**2441**	67	2468
14	2415	41	2442	68	2469
15	2416	42	2443	69	2470
16	2417	43	2444	70	2471
17	2418	44	2445	71	2472
18	2419	45	2446	72	2473
19	2420	46	2447	73	2474
20	2421	47	2448	74	2475
21	2422	48	2449	75	2476
22	2423	49	2450	76	2477
23	2424	50	2451	77	2478
24	2425	51	2452	78	2479
25	2426	52	2453	79	**2480**
26	2427	53	2454		
27	2428	54	2455		

3. Table for Filed Antenna

Ant.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	Printed	N/A	3.85	-

3.2 DESCRIPTION OF TEST MODES

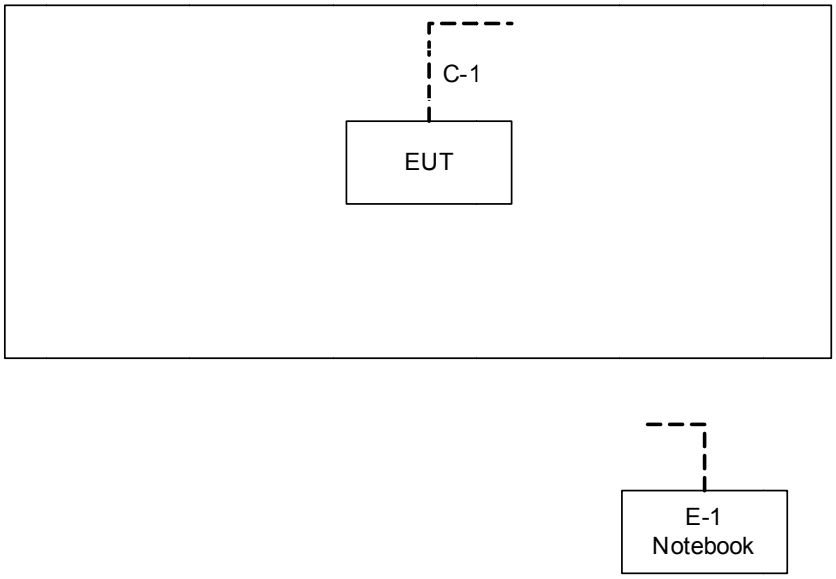
To investigate the maximum EMI emission characteristics generated from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration 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 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



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
E-1	Notebook	DELL	INSPIRON 1420	DOC	NA	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	10m	-

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

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 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

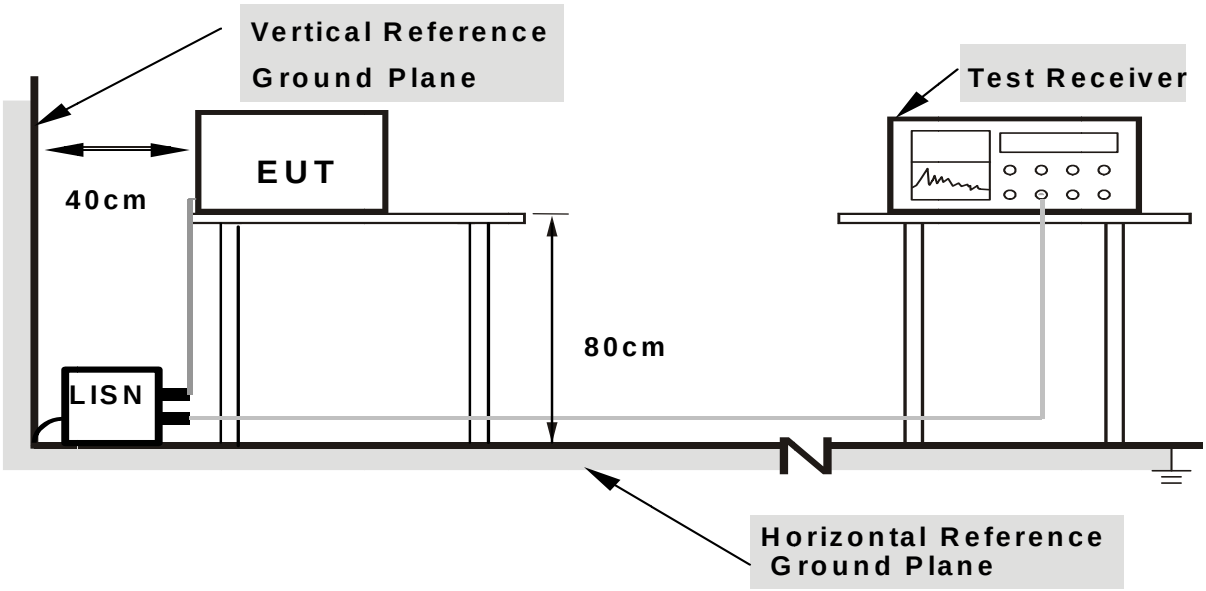
d. LISN at least 80 cm from nearest part of EUT chassis.

e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation

4.1.4 TEST SETUP



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

4.1.5 EUT 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.

4.1.6 EUT TEST CONDITIONS

Temperature: 25°C
Relative Humidity: 55%
Test Voltage: AC 120V/60Hz

4.1.7 TEST RESULTS

Please refer to the Attachment 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 (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

Harmonic emissions limits comply with below 54 dBuV/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).

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 Part15 (15.249) , Subpart C	
Limit	Frequency Range (MHz)
Field strength of fundamental 50000 μV/m (94 dBμV/m) @ 3 m	2400-2483.5
Field strength of harmonics 500 μV/m (54 dBμV/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

4.2.2 TEST PROCEDURE

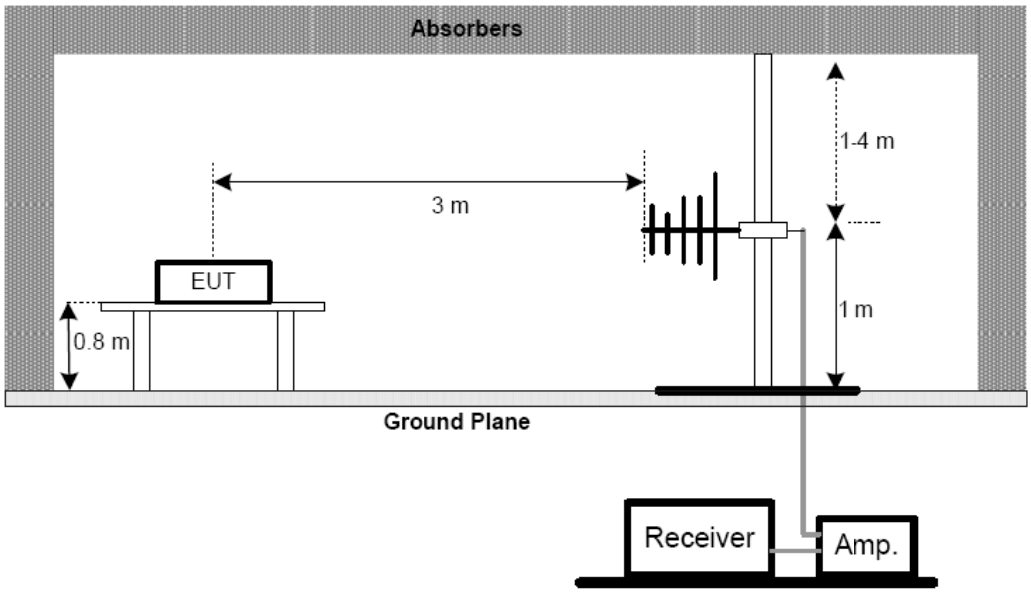
a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 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.

4.2.3 DEVIATION FROM TEST STANDARD

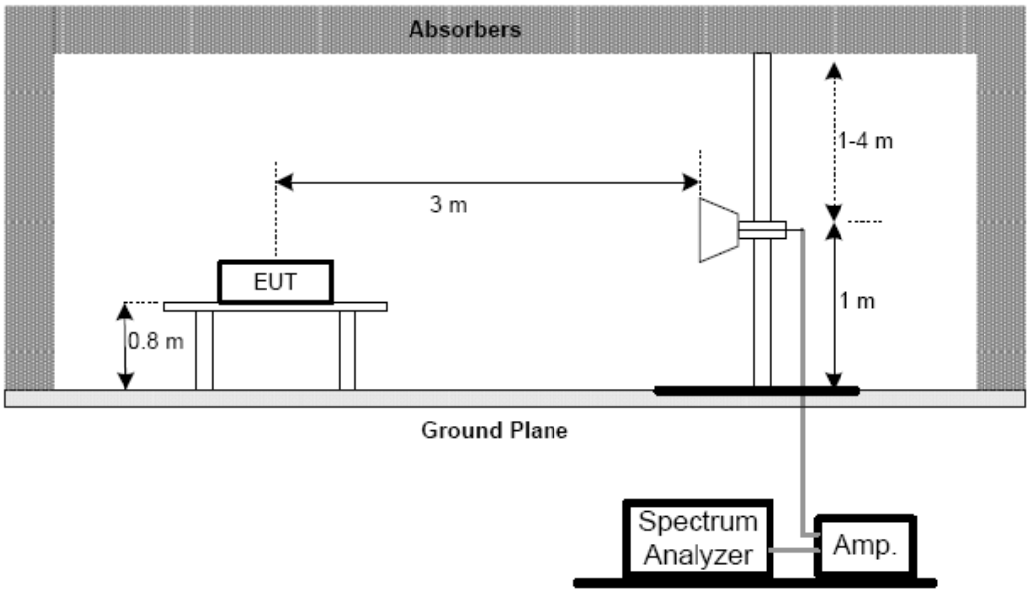
No deviation

4.2.4 TEST SETUP

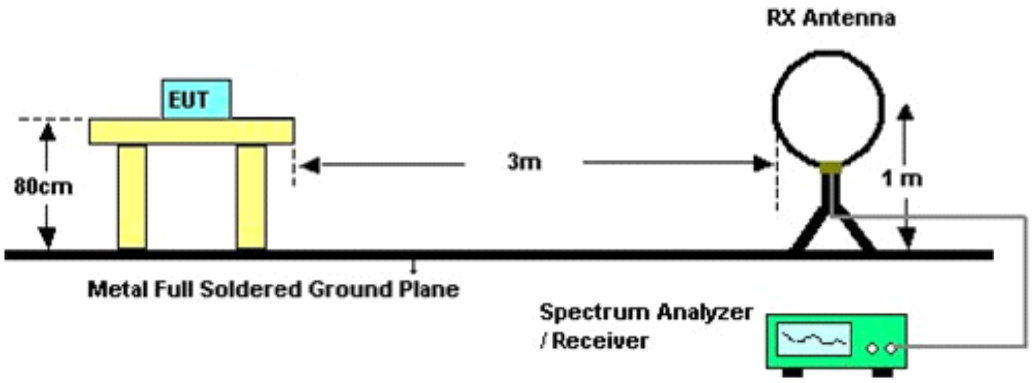
(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



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



(C) For radiated emissions below 30MHz



4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **4.1.6** 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: AC 120V/60Hz

4.2.7 TEST RESULTS (BELOW 30MHz)

Please refer to the Attachment B.

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 (specific distance / 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 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) 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 (ABOVE 1000 MHz)

Please refer to the Attachment D

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) The average value of fundamental frequency is:
Average = Peak value + 20log(Duty cycle) ,Final AV=PK-19.49

5. BANDWIDTH TEST

5.1 TEST 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.

5.2 DEVIATION FROM STANDARD

No deviation.

5.3 TEST SETUP

5.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

5.5 EUT TEST CONDITIONS

Temperature: 25°C
Relative Humidity: 55%
Test Voltage: AC 120V/60Hz

5.6 TEST RESULTS

Please refer to the Attachment E

6. MEASUREMENT INSTRUMENTS LIST AND SETTING

Conducted Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	LISN	EMCO	3816/2	00052765	Mar. 29, 2015
2	LISN	R&S	ENV216	101447	Mar. 29, 2015
3	Test Cable	N/A	C_17	N/A	Mar. 14, 2015
4	EMI TEST RECEIVER	R&S	ESCS30	833364/017	Mar. 29, 2015
5	50Ω Terminator	SHX	TF2-3G-A	08122902	Mar. 29, 2015

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	Test Receiver	R&S	ESCI	100382	Mar. 29, 2015
4	Test Cable	N/A	C-01_CB03	N/A	Jul. 01, 2015
5	Antenna	ETS	3115	00075789	Mar. 29, 2015
6	Amplifier	Agilent	8449B	3008A02274	Mar. 29, 2015
7	Spectrum	Agilent	E4408B	US39240143	Nov. 09, 2014
8	Test Cable	HUBER+SUHNER	C-45	N/A	Jan. 14, 2015
9	Controller	CT	SC100	N/A	N/A
10	Horn Antenna	EMCO	3115	9605-4803	Mar. 29, 2015
11	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Mar. 29, 2015
12	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Oct. 22, 2014

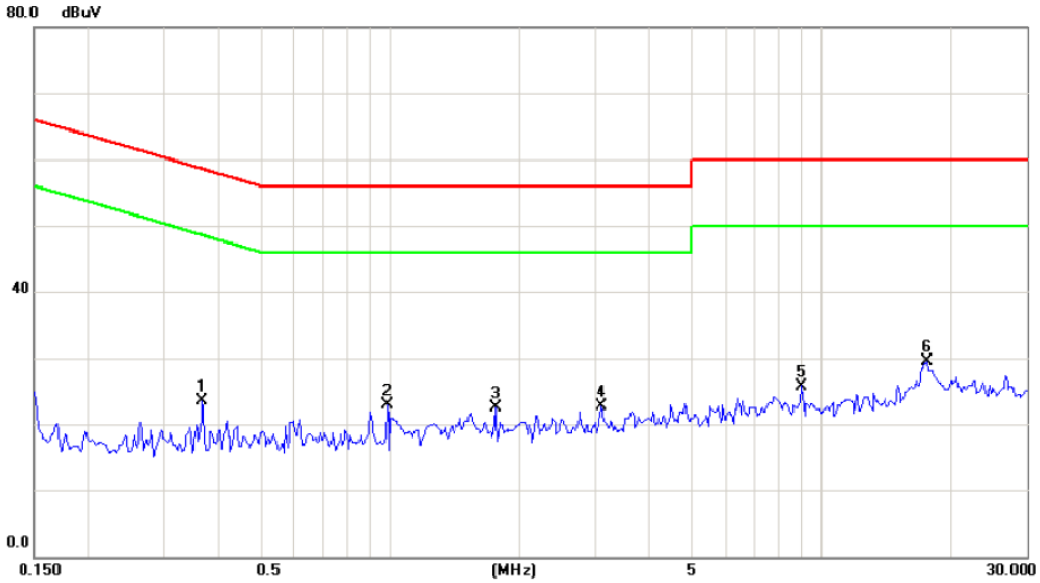
Bandwidth					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP 40	100185	Nov. 11, 2014

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

ATTACHMENT A - CONDUCTED EMISSION

Test Mode:	TX Mode

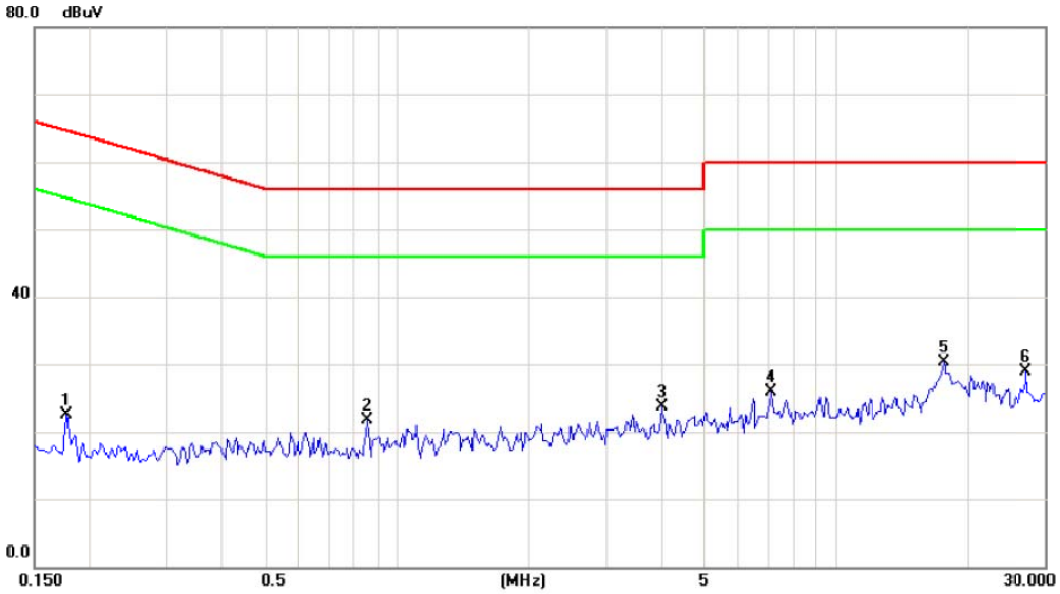
Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.3688	13.84	9.63	23.47	58.53	-35.06	peak	
2		0.9860	13.12	9.70	22.82	56.00	-33.18	peak	
3		1.7555	12.74	9.70	22.44	56.00	-33.56	peak	
4		3.1016	12.86	9.77	22.63	56.00	-33.37	peak	
5		9.0077	15.74	10.06	25.80	60.00	-34.20	peak	
6	*	17.6016	19.21	10.35	29.56	60.00	-30.44	peak	

Test Mode:	TX Mode

Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1773	12.79	9.62	22.41	64.61	-42.20	peak	
2		0.8570	11.96	9.67	21.63	56.00	-34.37	peak	
3		4.0078	13.85	9.83	23.68	56.00	-32.32	peak	
4		7.1133	16.01	9.96	25.97	60.00	-34.03	peak	
5	*	17.6055	19.92	10.36	30.28	60.00	-29.72	peak	
6		27.1602	18.05	10.89	28.94	60.00	-31.06	peak	

ATTACHMENT B - RADIATED EMISSION (9KHZ to 30MHZ)

Test Mode:	TX Mode

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.0196	0°	13.15	24.33	37.48	101.76	-64.28	AVG
0.0196	0°	14.56	24.33	38.89	121.76	-82.87	PEAK
0.0252	0°	24.78	23.97	48.75	99.58	-50.83	AVG
0.0252	0°	26.35	23.97	50.32	119.58	-69.26	PEAK
0.0358	0°	17.25	23.30	40.55	96.53	-55.98	AVG
0.0358	0°	18.86	23.30	42.16	116.53	-74.37	PEAK
0.0467	0°	6.35	22.61	28.96	94.22	-65.26	AVG
0.0467	0°	8.75	22.61	31.36	114.22	-82.86	PEAK
0.4975	0°	20.45	19.81	40.26	73.67	-33.41	QP
2.1076	0°	22.13	19.44	41.57	69.54	-27.97	QP

Freq. (MHz)	Ant. 0°/90°	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
0.0195	90°	12.85	24.30	37.15	121.80	-84.65	AVG
0.0195	90°	14.16	24.30	38.46	141.80	-103.34	PEAK
0.0471	90°	11.78	22.58	34.36	114.14	-79.78	AVG
0.0471	90°	13.15	22.58	35.73	134.14	-98.41	PEAK
0.0372	90°	8.75	23.21	31.96	116.19	-84.23	AVG
0.0372	90°	9.35	23.21	32.56	136.19	-103.63	PEAK
0.0469	90°	3.65	22.60	26.25	114.18	-87.93	AVG
0.0469	90°	5.35	22.60	27.95	134.18	-106.23	PEAK
0.4975	90°	20.60	19.81	40.41	73.67	-33.26	QP
2.1358	90°	22.63	19.42	42.05	69.54	-27.49	QP

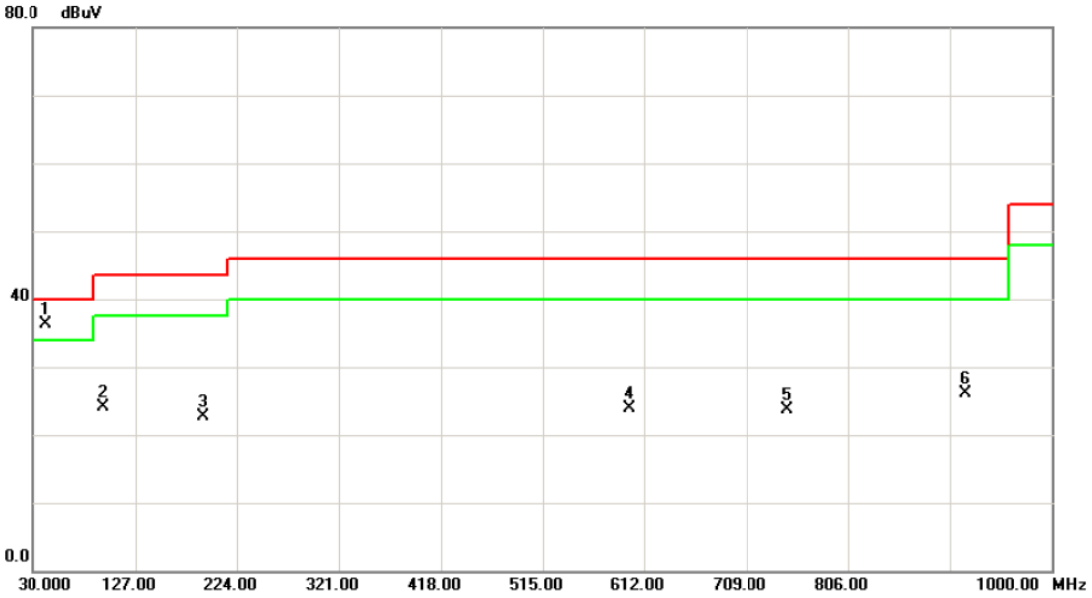
Remark:

(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 (specific distance / test distance) (dB);
(3) Limit line = specific limits (dBuV) + distance extrapolation factor.

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

Test Mode:	TX Low Channel

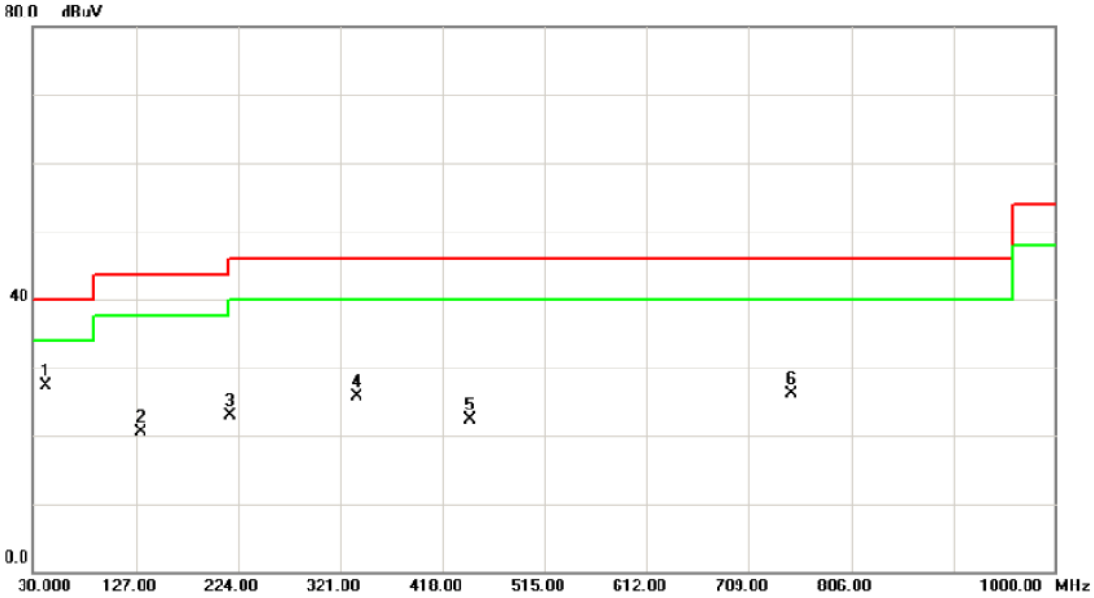
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	42.6100	50.14	-13.88	36.26	40.00	-3.74	peak	
2		95.9600	41.00	-16.98	24.02	43.50	-19.48	peak	
3		191.9900	37.12	-14.48	22.64	43.50	-20.86	peak	
4		598.4200	31.89	-7.91	23.98	46.00	-22.02	peak	
5		748.7700	28.38	-4.63	23.75	46.00	-22.25	peak	
6		917.5500	27.18	-1.07	26.11	46.00	-19.89	peak	

Test Mode:	TX Low Channel

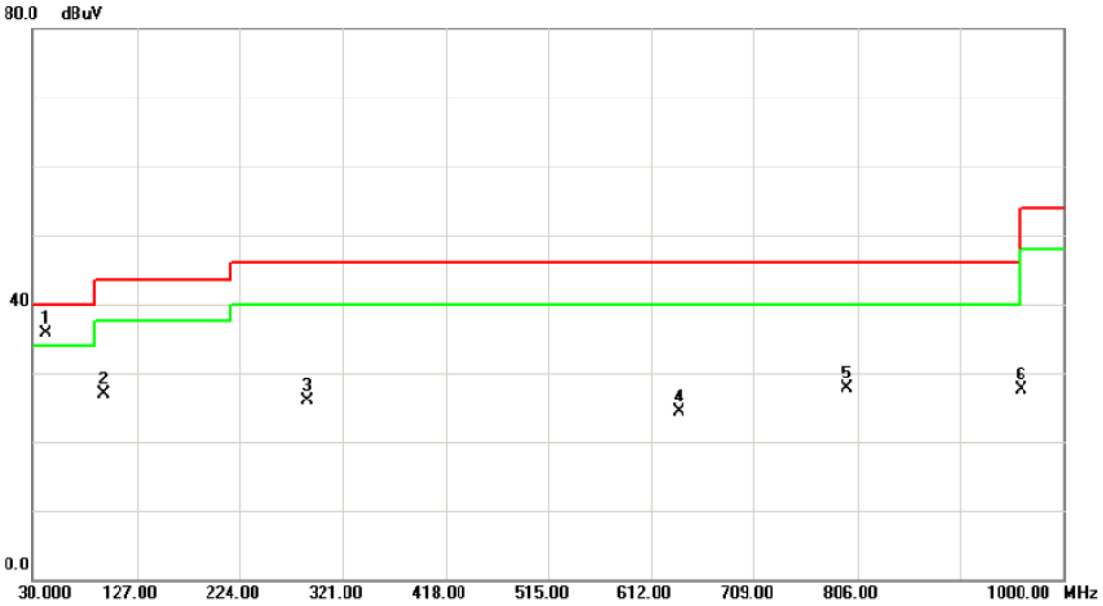
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	42.6100	41.13	-13.88	27.25	40.00	-12.75	peak	
2		131.8500	33.62	-13.08	20.54	43.50	-22.96	peak	
3		216.2400	38.08	-15.08	23.00	46.00	-23.00	peak	
4		336.5200	37.24	-11.58	25.66	46.00	-20.34	peak	
5		444.1900	31.13	-8.73	22.40	46.00	-23.60	peak	
6		749.7400	30.66	-4.63	26.03	46.00	-19.97	peak	

Test Mode:	TX Middle Channel

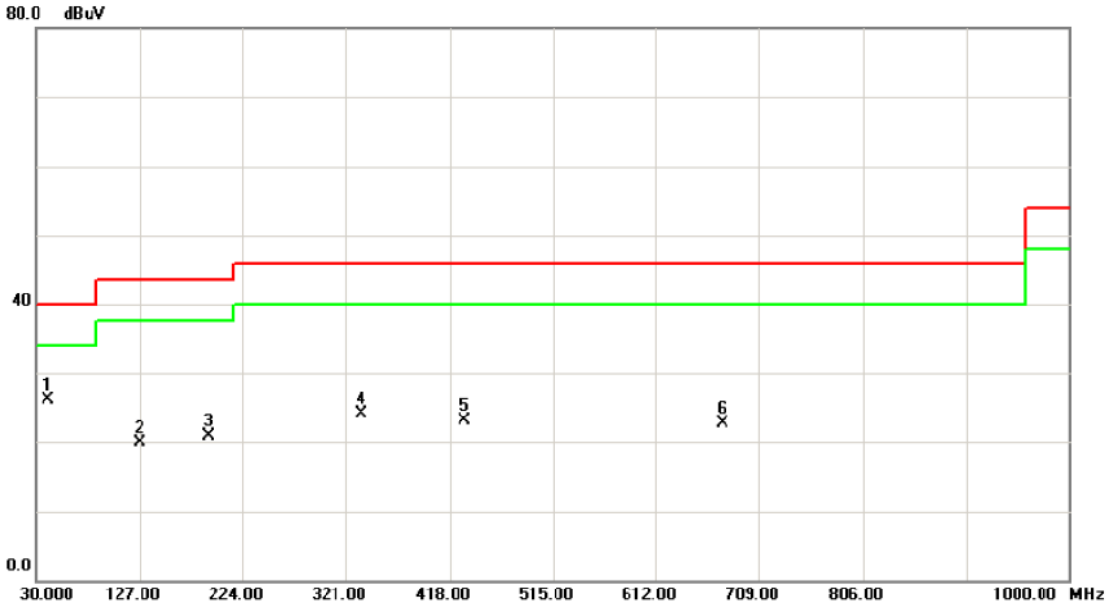
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	42.6100	49.62	-13.88	35.74	40.00	-4.26	peak	
2		95.9600	43.84	-16.98	26.86	43.50	-16.64	peak	
3		288.0200	37.22	-11.40	25.82	46.00	-20.18	peak	
4		638.1900	30.13	-5.80	24.33	46.00	-21.67	peak	
5		796.3000	30.79	-3.02	27.77	46.00	-18.23	peak	
6		960.2300	27.71	-0.25	27.46	54.00	-26.54	peak	

Test Mode:	TX Middle Channel

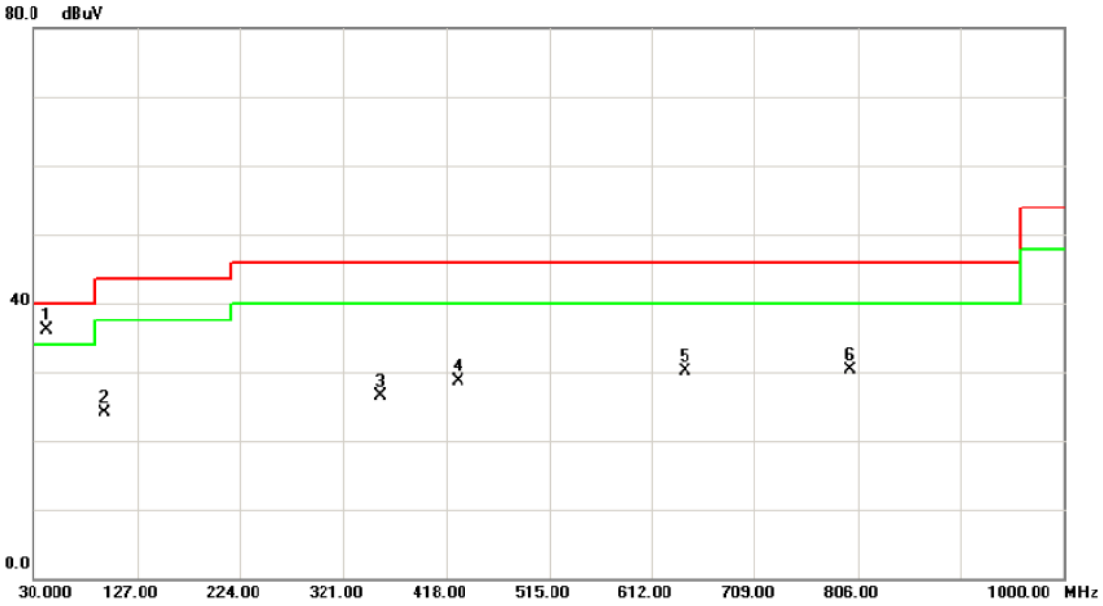
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	42.6100	40.02	-13.88	26.14	40.00	-13.86	peak	
2		127.0000	33.40	-13.40	20.00	43.50	-23.50	peak	
3		191.9900	35.35	-14.48	20.87	43.50	-22.63	peak	
4		335.5500	35.58	-11.56	24.02	46.00	-21.98	peak	
5		431.5800	32.01	-8.95	23.06	46.00	-22.94	peak	
6		674.0800	27.73	-5.04	22.69	46.00	-23.31	peak	

Test Mode:	TX High Channel

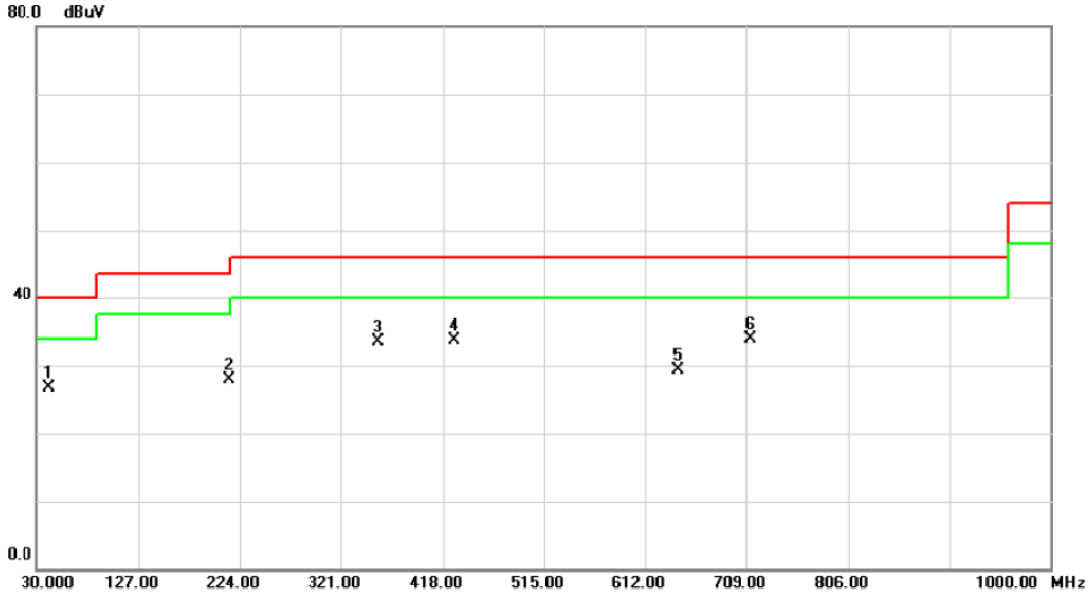
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	42.6100	50.02	-13.88	36.14	40.00	-3.86	peak	
2		95.9600	41.13	-16.98	24.15	43.50	-19.35	peak	
3		356.8900	38.07	-11.48	26.59	46.00	-19.41	peak	
4		428.6700	37.71	-9.00	28.71	46.00	-17.29	peak	
5		643.0400	35.65	-5.53	30.12	46.00	-15.88	peak	
6		799.2100	33.19	-2.92	30.27	46.00	-15.73	peak	

Test Mode:	TX High Channel

Horizontal

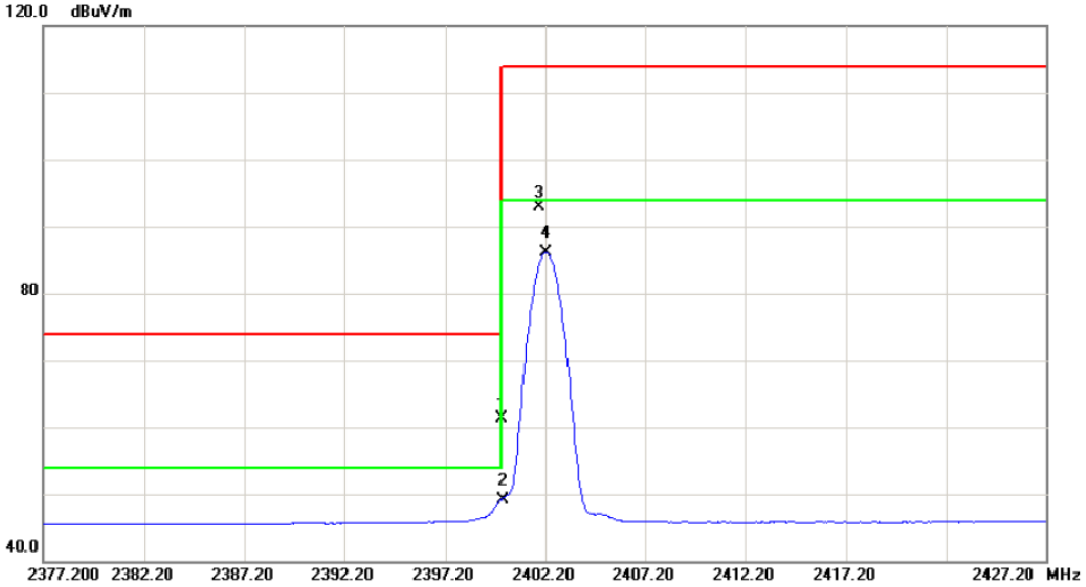


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		42.6100	40.53	-13.88	26.65	40.00	-13.35	peak	
2		214.3000	43.13	-15.18	27.95	43.50	-15.55	peak	
3		356.8900	45.08	-11.48	33.60	46.00	-12.40	peak	
4		428.6700	42.71	-9.00	33.71	46.00	-12.29	peak	
5		643.0400	34.75	-5.53	29.22	46.00	-16.78	peak	
6	*	713.8500	38.74	-4.84	33.90	46.00	-12.10	peak	

ATTACHMENT D - RADIATED EMISSION (ABOVE 1000MHZ)

Orthogonal Axis :	X
Test Mode :	TX Low Channel

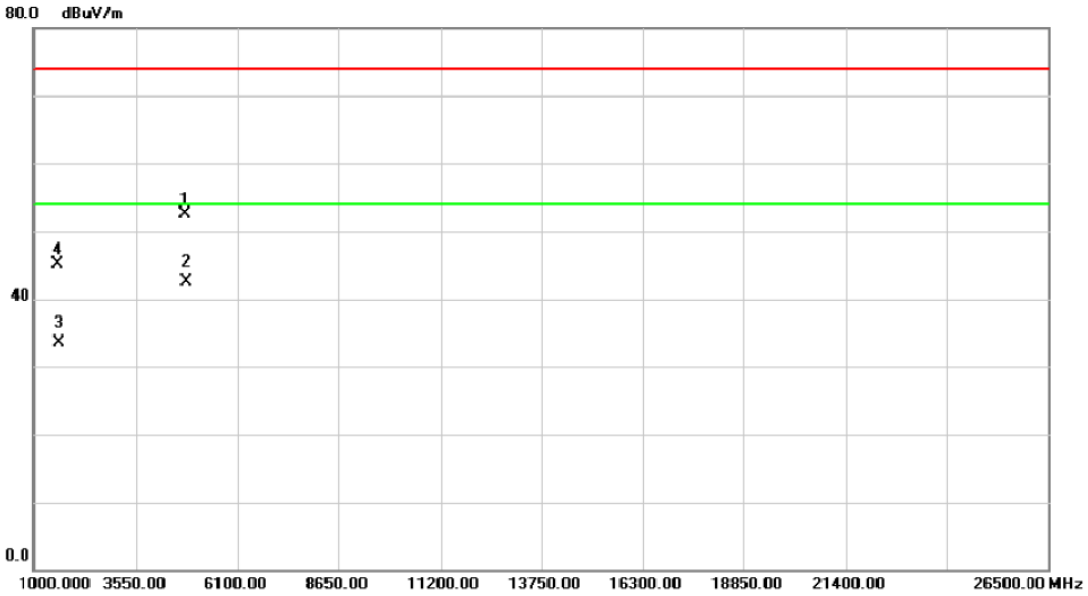
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2400.000	29.32	31.89	61.21	74.00	-12.79	peak	
2	*	2400.000	17.26	31.89	49.15	54.00	-4.85	AVG	
3		2401.900	60.95	31.89	92.84	114.0	-21.16	peak	
4		2402.250	54.19	31.89	86.08	94.00	-7.92	AVG	

Orthogonal Axis :	X
Test Mode :	TX Low Channel

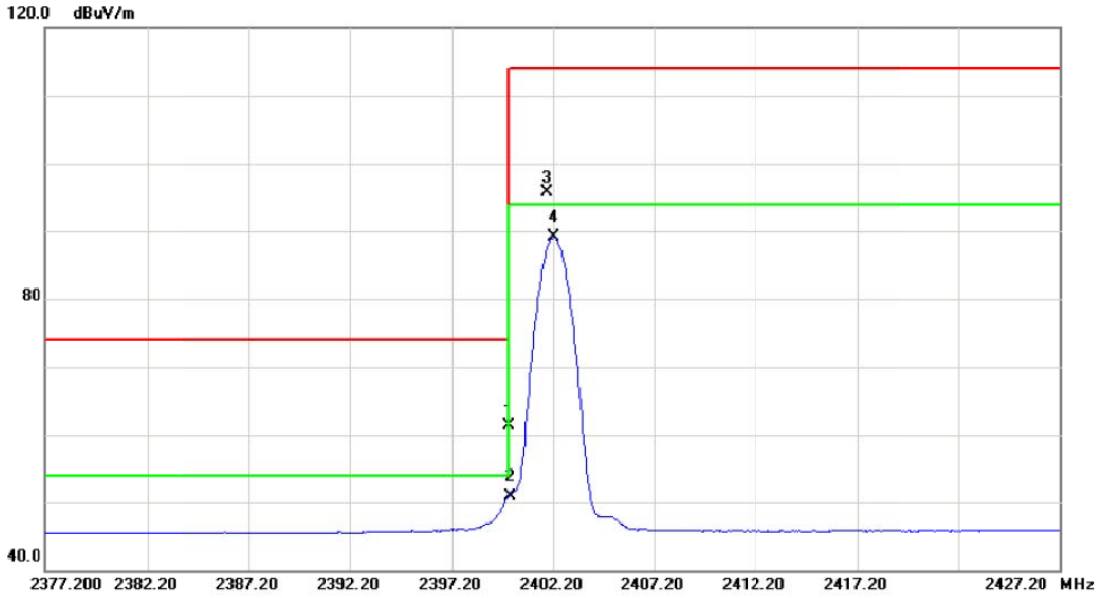
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4803.760	48.83	3.58	52.41	74.00	-21.59	peak	
2	*	4804.000	38.98	3.58	42.56	54.00	-11.44	AVG	
3		1600.820	38.78	-5.18	33.60	54.00	-20.40	AVG	
4		1600.660	50.26	-5.18	45.08	74.00	-28.92	peak	

Orthogonal Axis :	X
Test Mode :	TX Low Channel

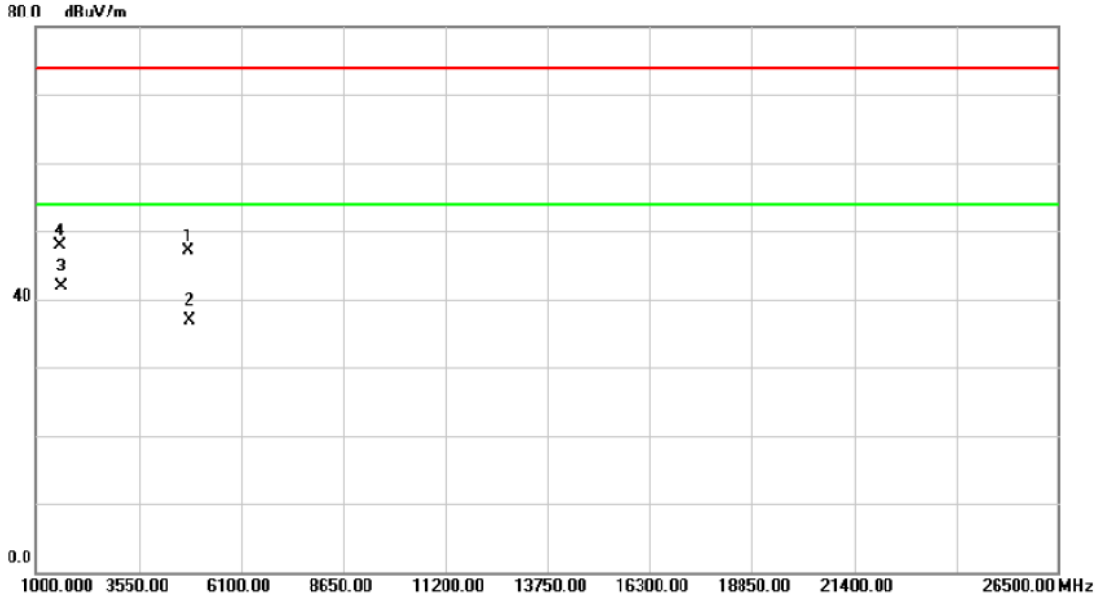
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2400.000	29.43	31.89	61.32	74.00	-12.68	peak	
2	*	2400.000	19.03	31.89	50.92	54.00	-3.08	AVG	
3		2401.900	63.88	31.89	95.77	114.0	-18.23	peak	
4		2402.250	57.16	31.89	89.05	94.00	-4.95	AVG	

Orthogonal Axis :	X
Test Mode :	TX Low Channel

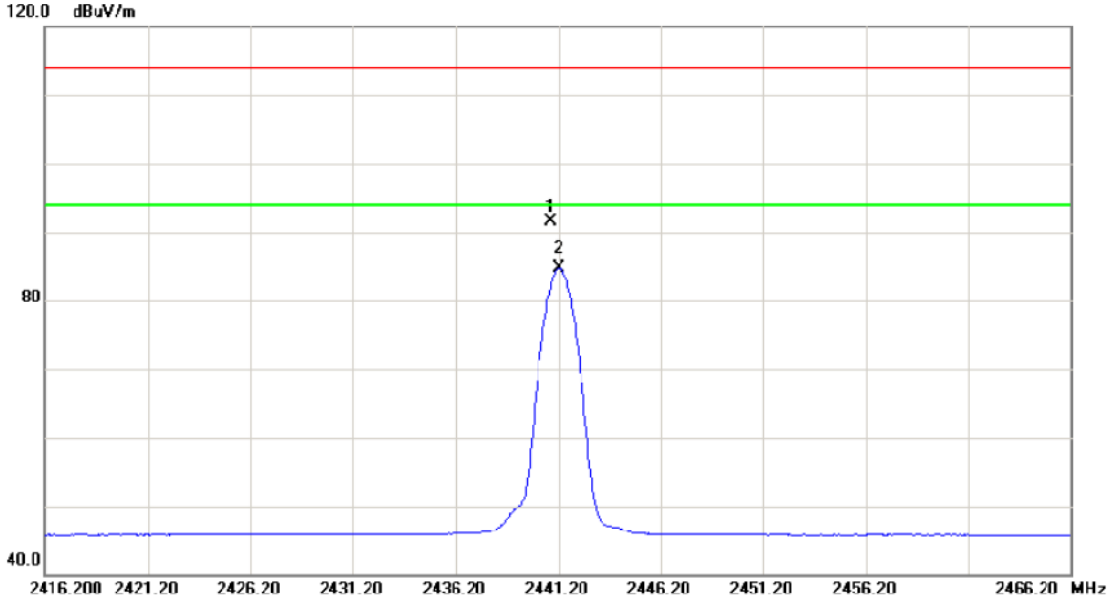
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4803.820	43.51	3.58	47.09	74.00	-26.91	peak	
2		4804.020	33.34	3.58	36.92	54.00	-17.08	AVG	
3	*	1600.830	47.08	-5.18	41.90	54.00	-12.10	AVG	
4		1600.750	53.02	-5.18	47.84	74.00	-26.16	peak	

Orthogonal Axis :	X
Test Mode :	TX Middle Channel

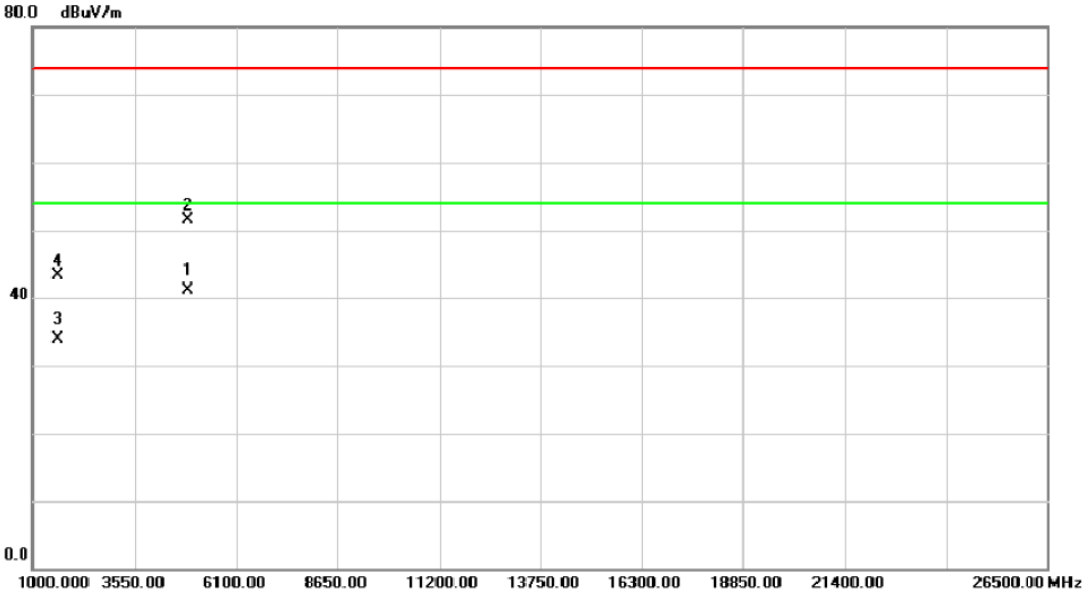
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2440.850	59.64	31.95	91.59	114.0	-22.41	peak	
2	*	2441.250	52.84	31.95	84.79	94.00	-9.21	AVG	

Orthogonal Axis :	X
Test Mode :	TX Middle Channel

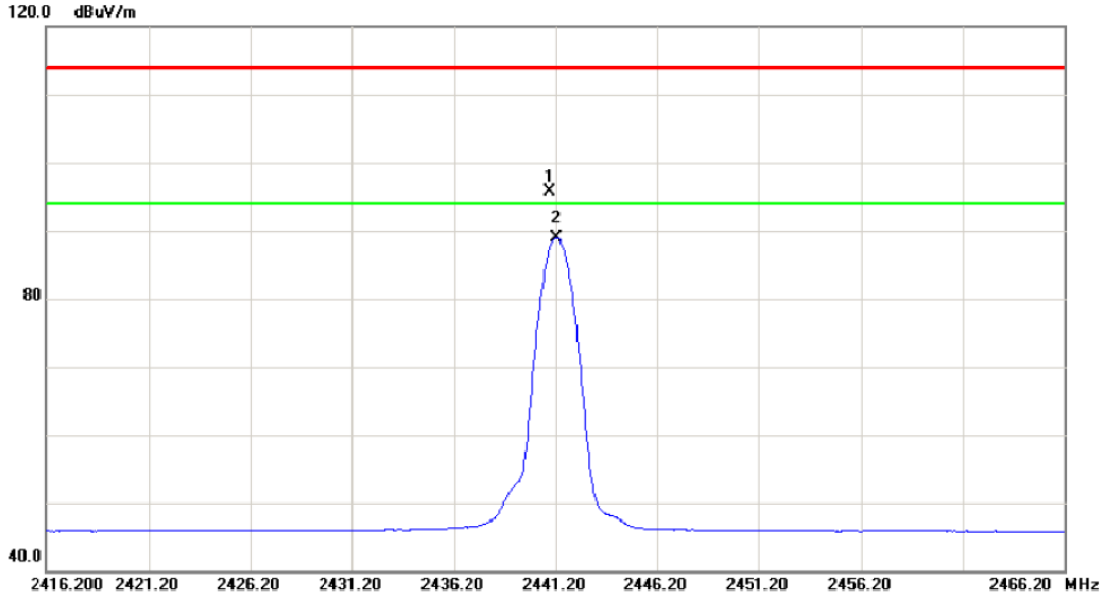
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	4882.020	37.37	3.73	41.10	54.00	-12.90	AVG	
2		4882.080	47.75	3.73	51.48	74.00	-22.52	peak	
3		1626.840	38.85	-5.03	33.82	54.00	-20.18	AVG	
4		1626.880	48.28	-5.03	43.25	74.00	-30.75	peak	

Orthogonal Axis :	X
Test Mode :	TX Middle Channel

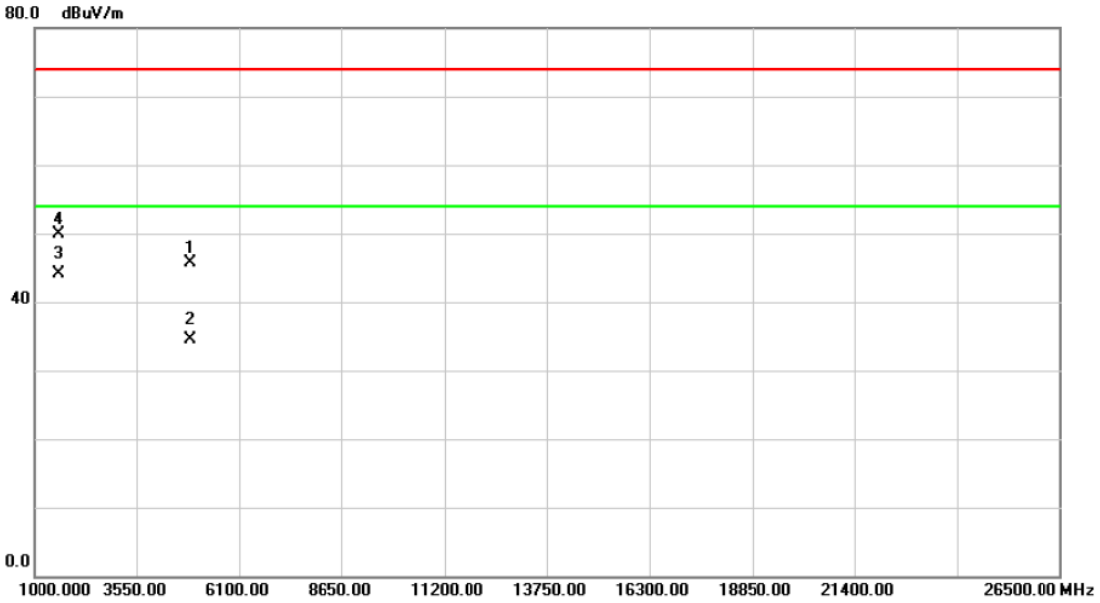
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2440.900	63.83	31.95	95.78	114.0	-18.22	peak	
2	*	2441.250	57.04	31.95	88.99	94.00	-5.01	AVG	

Orthogonal Axis :	X
Test Mode :	TX Middle Channel

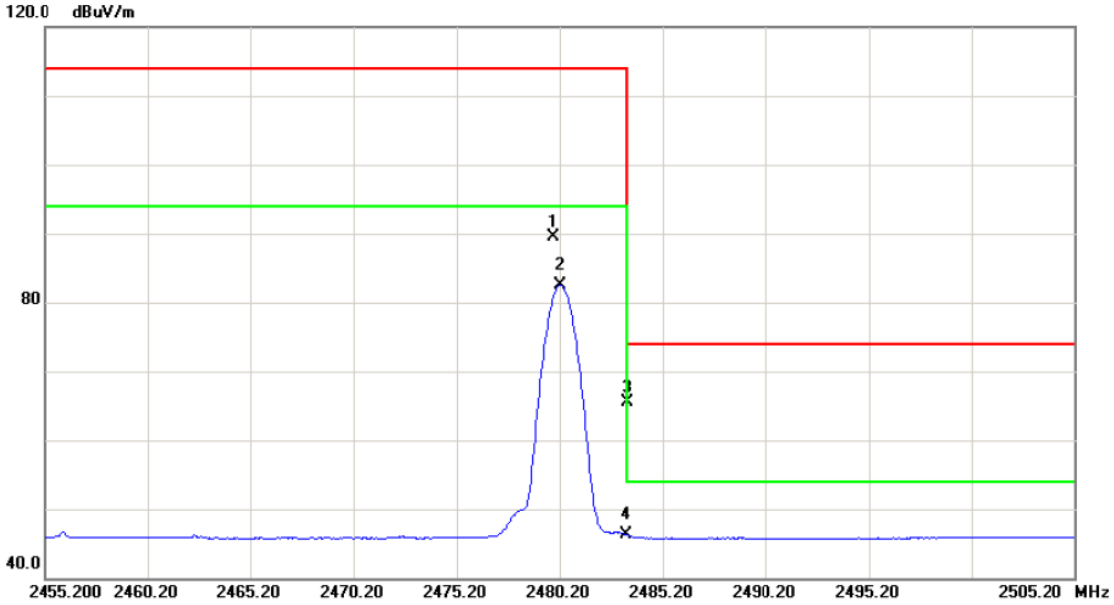
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4881.920	42.04	3.73	45.77	74.00	-28.23	peak	
2		4881.980	30.76	3.73	34.49	54.00	-19.51	AVG	
3	*	1626.820	49.17	-5.03	44.14	54.00	-9.86	AVG	
4		1626.850	54.89	-5.03	49.86	74.00	-24.14	peak	

Orthogonal Axis :	X
Test Mode :	TX High Channel

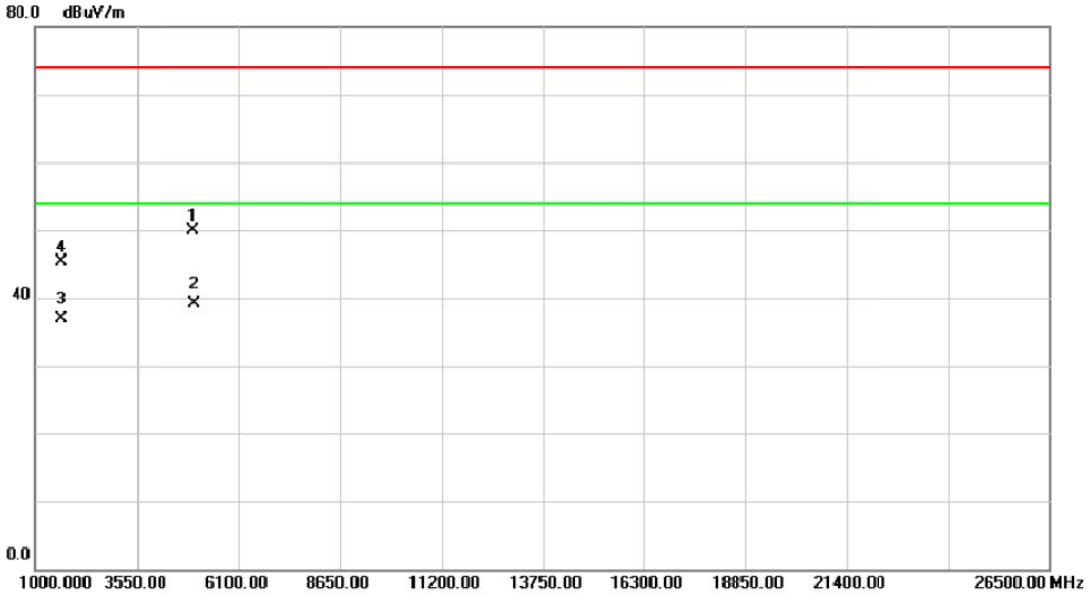
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2479.900	57.50	32.00	89.50	114.0	-24.50	peak	
2		2480.250	50.50	32.00	82.50	94.00	-11.50	AVG	
3		2483.500	33.49	32.01	65.50	74.00	-8.50	peak	
4	*	2483.500	14.20	32.01	46.21	54.00	-7.79	AVG	

Orthogonal Axis :	X
Test Mode :	TX High Channel

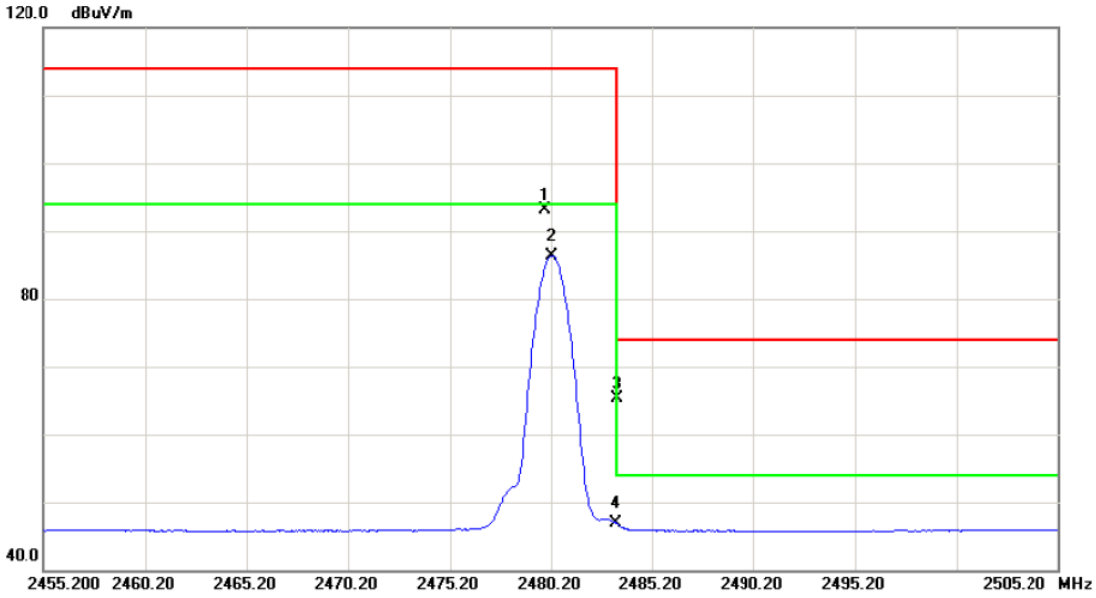
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4959.900	46.03	3.88	49.91	74.00	-24.09	peak	
2	*	4960.000	35.18	3.88	39.06	54.00	-14.94	AVG	
3		1652.820	41.69	-4.88	36.81	54.00	-17.19	AVG	
4		1652.900	50.25	-4.88	45.37	74.00	-28.63	peak	

Orthogonal Axis :	X
Test Mode :	TX High Channel

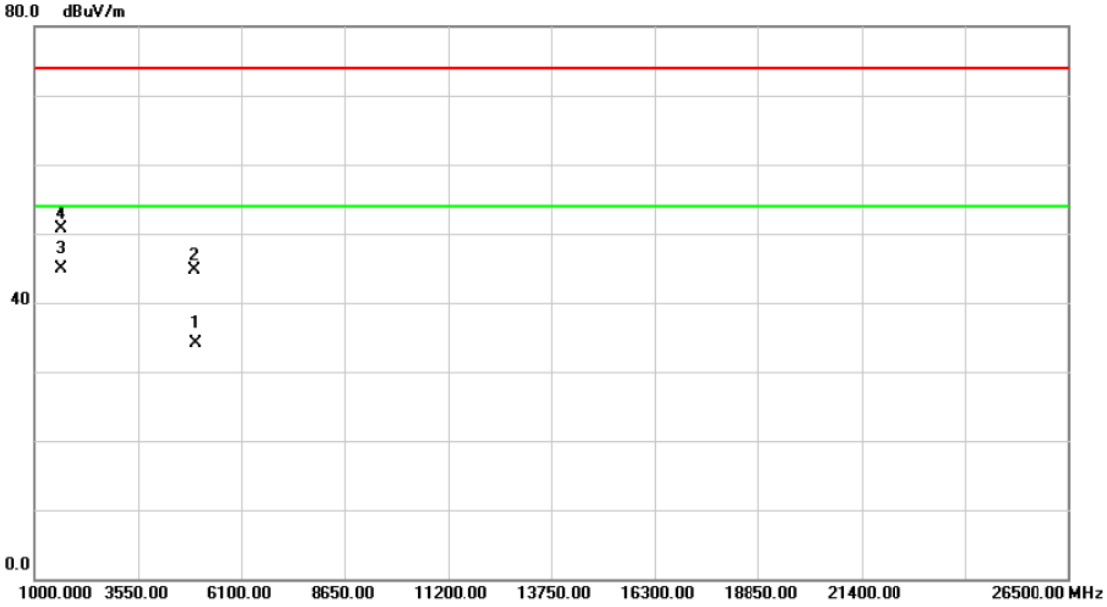
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2479.900	61.16	32.00	93.16	114.0	-20.84	peak	
2		2480.250	54.36	32.00	86.36	94.00	-7.64	AVG	
3		2483.500	33.33	32.01	65.34	74.00	-8.66	peak	
4	*	2483.500	14.80	32.01	46.81	54.00	-7.19	AVG	

Orthogonal Axis :	X
Test Mode :	TX High Channel

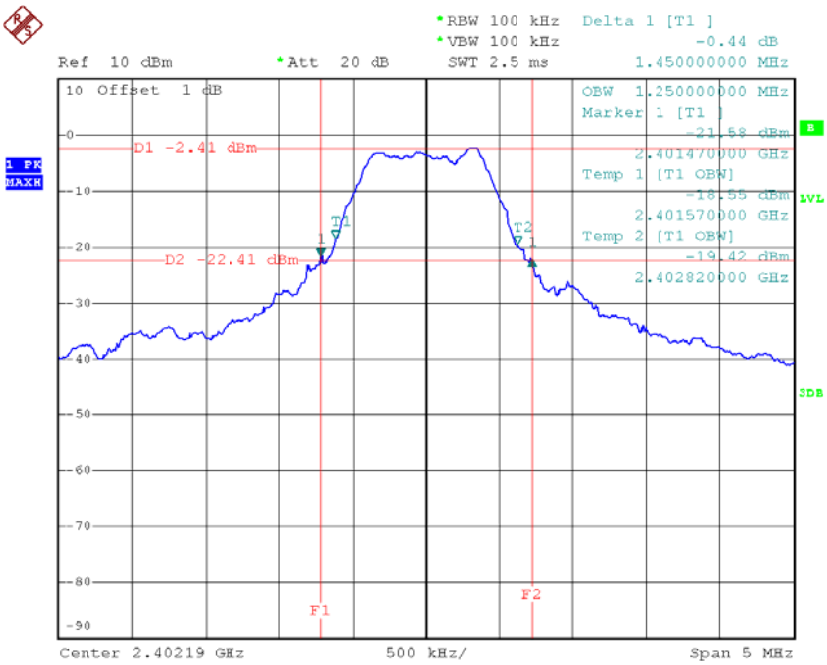
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4960.000	30.31	3.88	34.19	54.00	-19.81	AVG	
2		4960.300	40.73	3.88	44.61	74.00	-29.39	peak	
3	*	1652.830	49.88	-4.88	45.00	54.00	-9.00	AVG	
4		1652.860	55.60	-4.88	50.72	74.00	-23.28	peak	

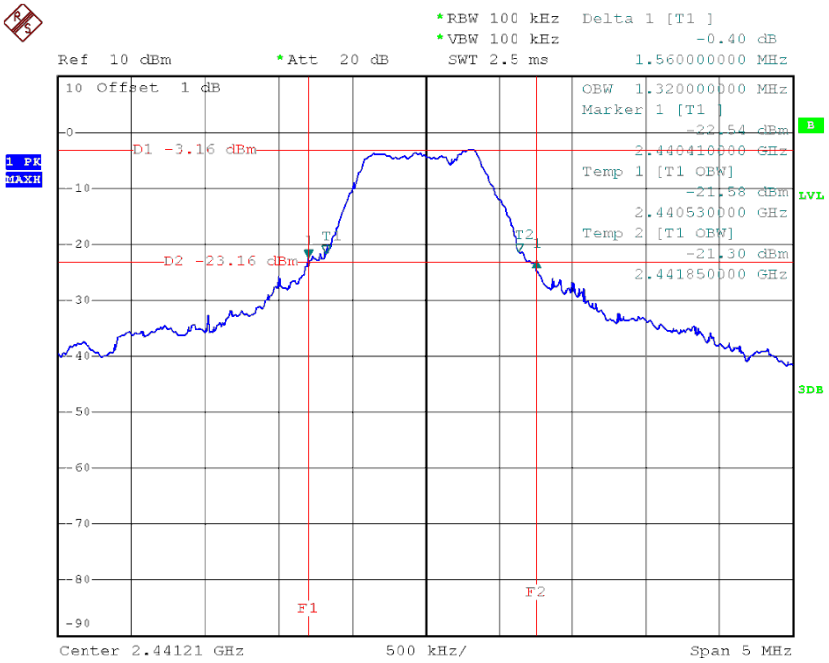
ATTACHMENT E - BANDWIDTH

TX Low Channel



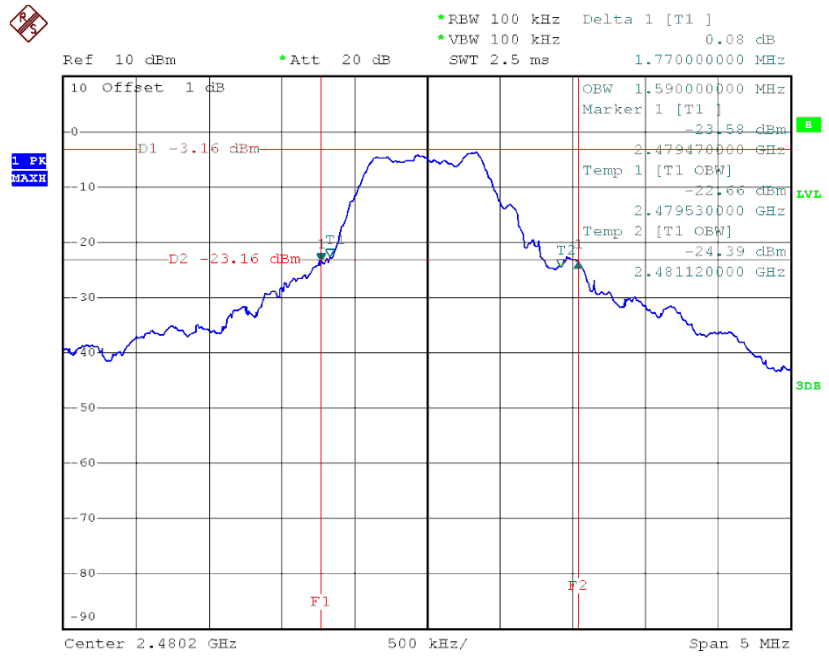
Date: 5.AUG.2014 23:01:32

TX Middle Channel



Date: 5.AUG.2014 23:04:22

TX High Channel



Date: 5.AUG.2014 23:08:02