



## EMC TEST REPORT for Intentional Radiator

### No. 141000895SHA-001

Applicant : Northwest Instrument Inc.  
330 Waterloo Valley Road, Budd Lake, New Jersey, 07828,  
USA.

Manufacturer 1 : Northwest Instrument (Shanghai) Co., Ltd  
B2 NO.303, Xinke Road, Qingpu Industrial Zone,  
Shanghai, China

Manufacturer 2 : Rosenberger Technology (Kunshan) Co., Ltd.  
No.6, Shenan Road, Dianshanhu Town, Kunshan City,  
Jiangsu Province, China

Equipment : Laser Distance Meters

Type/Model : TLM99s, TLM99si

#### SUMMARY

The equipment complies with the requirements according to the following standard(s):

**47CFR Part 15 (2013):** Radio Frequency Devices

**ANSI C63.4 (2003):** American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

**RSS-210 Issue 8 (December 2010):** Low-power Licence-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment

**RSS-Gen Issue 3 (December 2010):** General Requirements and Information for the Certification of Radiocommunication Equipment

Date of issue: October 8, 2014

Prepared by:

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Reviewed by:

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**FCC ID: 2ADA6TLM99**  
**IC: 12409A-TLM99**

## **Description of Test Facility**

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## **1. General Information**

### **1.1 Applicant Information**

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Manufacturer 1: Northwest Instrument (Shanghai) Co., Ltd  
B2 NO.303, Xinke Road, Qingpu Industrial Zone,  
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Manufacturer 2 : RosenbergerTechnology (Kunshan) Co., Ltd.  
No.6, Shenan Road, Dianshanhu Town, Kunshan City,  
Jiangsu Province, China

Sample received date : September 22, 2014

Date of test : September 22, 2014 ~ October 8, 2014

### **1.2 Identification of the EUT**

Equipment: Laser Distance Meters

Type/model: TLM99s, TLM99si

FCC ID: 2ADA6TLM99

IC: 12409A-TLM99

### **1.3 Technical specification**

Operation Frequency Band:	2402 - 2480 MHz
Protocol:	BT 4.0 LE
Modulation:	GFSK
Antenna Designation:	PCB antenna
Gain of Antenna:	3.5dBi
Rating:	DC 3V
Description of EUT:	EUT is a Laser Distance Meters. It has two models, they are the same except the model name. Only the model of TLM99S was chosen to perform all the tests as representative.

Channel Description: There are 40 channels in all. The designed channel spacing is 2MHz.

Channel Identifier	Frequency (MHz)
low	2402
middle	2440
high	2480

### **1.4 Mode of operation during the test / Test peripherals used**

While testing the transmitter mode of the EUT, the internal modulation is applied. All the functions of the host device except the BT module were set on stand-by mode.

EUT was controlled by the software of UartAssist to set the fixing channel and continue transmitting, the software was provided by the customer

Test Peripherals:  
PC: HP Compaq 6280 Pro Microtower

## 2. Test Specification

### 2.1 Instrument list

Equipment	Type	Manu.	Internal no.	Cal. Date	Due date
Test Receiver	ESCS 30	R&S	EC 2107	2013-10-21	2014-10-20
Test Receiver	ESIB 26	R&S	EC 3045	2013-10-20	2014-10-19
Test Receiver	ESCI 7	R&S	EC4501	2013-12-25	2014-12-24
Voltage Probe	ESH2-Z3	R&S	EC 3405	2014-01-12	2015-01-11
Voltage Probe	TK9420	Schwarzbeck	EC 4888	2014-06-07	2015-06-06
A.M.N.	ESH2-Z5	R&S	EC 3119	2014-01-09	2015-01-08
A.M.N.	ENV 216	R&S	EC 3393	2014-08-09	2015-08-08
A.M.N.	ENV 216	R&S	EC 3394	2014-08-09	2015-08-08
A.M.N.	ENV4200	R&S	EC3558	2014-08-09	2015-08-08
Click meter	CL55C	AFJ	EC 2253	2014-08-20	2015-08-19
I.S.N.	FCC-TLISN -T2-02	FCC	EC3754	2014-01-09	2015-01-08
I.S.N.	FCC-TLISN -T4-02	FCC	EC3755	2014-01-09	2015-01-08
I.S.N.	FCC-TLISN -T8-02	FCC	EC3756	2014-01-09	2015-01-08
Current probe	EZ-17	R&S	EC 3221	2014-01-11	2015-01-10
Absorbing clamp	MDS 21	R&S	EC 2108	2014-01-12	2015-01-11
Tri-loop	HXYZ 9170	Schwarzbeck	EC 3384	2014-06-19	2015-06-18
Harmonic-flicker system	5001ix-PACS-1	CI	EC 2110	2014-01-09	2015-01-08
Conduct immunity system	UCS 500M6B	EM TEST	EC 2958	2014-04-08	2015-04-07
Automatic transformer	MV2616	EM TEST	EC 2957	Not required	Not required
Capacity clamp	HFK	EM TEST	EC 2959	Not required	Not required
ESD generator	ditto	EM TEST	EC 2956	2014-05-21	2015-05-20
ESD generator	NSG 437	TESEQ	EC 4792-4	2014-02-21	2015-02-20
Surge generator	TSS 500M2F	EM TEST	EC 2960	2014-09-24	2015-09-23
Surge generator	TSS 500M4	EM TEST	EC 2961	2014-01-10	2015-01-09
Surge Coupling network	CNV 504M	EM TEST	EC 2958-2	2014-01-09	2015-01-08
Surge Coupling network	CNV 504S1	EM TEST	EC 2958-1	2014-01-09	2015-01-08
Signal generator	SML 01	R&S	EC 2338	2014-04-12	2015-04-11
Power amplifier	75A250	AR	EC 3043-1	2014-08-16	2015-08-15
CDN	CDN M216	Schaffner	EC 2113-2	2014-08-02	2015-08-01
CDN	CDN M316	Schaffner	EC 2113-1	2014-09-30	2015-09-29

CDN	CDN T2	EM TEST	EC 4970	2013-10-24	2014-10-23
CDN	CDN T4	EM TEST	EC 3043-4	2014-01-09	2015-01-08
CDN	CDN M1/16A	EM TEST	EC 4792-6	2014-02-18	2015-02-17
CDN	CDN M1/16A	EM TEST	EC 4792-7	2014-02-18	2015-02-17
CDN	CDN M1/32A	EM TEST	EC 4792-10	2014-02-18	2015-02-17
CDN	CDN M3N/16A	EM TEST	EC 4792-12	2014-02-18	2015-02-17
CDN	CDN M3N/32A	EM TEST	EC 4792-13	2014-02-18	2015-02-17
CDN	CDN T8-RJ45	EM TEST	EC 4792-15	2014-02-18	2015-02-17
Calibration Impedance	50	AR	EC 4792-17	2014-02-18	2015-02-17
Calibration Impedance	100	AR	EC 4792-16	2014-02-18	2015-02-17
EM clamp	EM 101	EM TEST	EC 3043-6	2013-10-20	2014-10-19
Power meter	PM2002	AR	EC3043-7	2013-10-18	2014-10-17
Power sensor	PH2000	AR	EC3043-8	2013-10-18	2014-10-17
Attenuator	ATT6/75	EM TEST	EC 3043-3	2014-01-09	2015-01-08
Attenuator	68-6-44	Weinschel	EC 3043-9	2014-01-09	2015-01-08
DDC	DC 2600	AR	EC 3043-5	2014-01-09	2015-01-08
DDC	DC 6180A	AR	EC 3044-5	2013-08-02	2014-08-05
DDC	DC 7144A	AR	EC 3044-6	2014-01-09	2015-01-08
Calibration Impedance	50	AR	EC 3043-12	2014-01-09	2015-01-08
Calibration Impedance	R100	AR	EC 3043-10	2014-01-09	2015-01-08
Calibration Impedance	R100	AR	EC 3043-11	2014-01-09	2015-01-08
Calibration Impedance	CAL U100A	Schaffner	EC 2113-3	2014-01-09	2015-01-08
Calibration Impedance	TRA U150	Schaffner	EC 2113-4	2014-01-09	2015-01-08
Ultra-broadband antenna	HL 562	R&S	EC 3046-1	2014-05-16	2015-05-14
Bilog Antenna	CBL 6112D	TESEQ	EC 4206	2014-04-28	2015-04-27
Horn antenna	HF 906	R&S	EC 3049	2014-04-28	2015-04-27
Horn antenna	3117	ETS	EC 4792-1	2014-04-17	2015-04-16
Horn antenna	HAP18-26W		EC 4792-3	2014-04-10	2015-04-09
Pre-amplifier	Pre-amp 18	R&S	EC 3222	2014-04-12	2015-04-11
Pre-amplifier	Tpa0118-40	R&S	EC 4792-2	2014-04-12	2015-04-11
Log-period antenna	AT 1080	AR	EC 3044-7	2014-04-28	2015-04-27
Biconical antenna	3109PX	ETS	EC3564	2014-08-23	2015-08-22
Horn antenna	AT 4002	AR	EC 3044-8	2014-04-28	2015-04-27
Signal generator	SMR 20	R&S	EC 3044-1	2014-08-16	2015-08-15
Power amplifier	150W1000	AR	EC 3044-2	2014-08-16	2015-08-15

Power amplifier	25S1G4	AR	EC 3044-4	2014-08-16	2015-08-15
Field meter	FM 5004	AR	EC 3044-3	2013-10-21	2014-10-20
Field sensor	FP 6001	AR	EC 3044-9	2013-10-21	2014-10-20
Semi-anechoic chamber	-	Albatross project	EC 3048	2014-05-12	2015-05-11
Fully-anechoic chamber	-	Albatross project	EC 3047	2014-05-12	2015-05-11
Digital illuminance meter	TES 1332	TES	EC 2451	2014-06-05	2015-06-04
Therom-Hygrograph	ZJ1-2A	S.M.I.F.	EC 3323	2014-04-14	2015-04-13
Therom-Hygrograph	ZJ1-2A	S.M.I.F.	EC 3324	2014-04-14	2015-04-13
Therom-Hygrograph	ZJ1-2A	S.M.I.F.	EC 3783	2014-01-09	2015-01-08
Therom-Hygrograph	ZJ1-2A	S.M.I.F.	EC 3326	2014-03-10	2015-03-09
Pressure meter	YM3	Shanghai Mengde	EC 3320	2014-06-12	2015-06-13
Pressure meter	YM3	Shanghai Mengde	EC 3306	2014-07-26	2015-07-25
Pressure meter	YM3	Shanghai Mengde	EC 4620	2014-07-31	2015-07-30
Isolation transformer	-	Intertek	EC 2100	Not required	Not required
TV generator	TG39	ShibaSoku	EC3555	2014-04-17	2015-04-16
Stable power source	APS 11020	APC	EC 3209	Not required	Not required
Freq. Variable power source	AFC 11010	APC	EC 3210	Not required	Not required
Freq. Variable power source	AFC 33020	APC	EC 3211	Not required	Not required
Multi-meter	179	FLUKE	EC 3226	2014-09-11	2015-09-10
Shielded room	-	Zhongyu	EC 2838	2014-01-10	2019-01-09
Shielded room	-	Zhongyu	EC 2839	2014-01-10	2019-01-09
Gomb generator	CG-515	com-power	EC3974	2013-10-21	2014-10-20
Oscilloscope	DPO 4504	Tektronix	EC 3515	2014-01-05	2015-01-04
DC Power supply (SMT)		Yufan	EC3561	Not required	Not required
Variable Voltage Transformer (SMT)	TSGC2J-20		EC4740	Not required	Not required
High Pass Filter	WHKX 1.0/15G-10SS	Wainwright	EC4297-1	2014-01-08	2015-01-07
High Pass Filter	WHKX 2.8/18G-12SS	Wainwright	EC4297-2	2014-01-08	2015-01-07
High Pass Filter	WHKX 7.0/1.8G-8SS	Wainwright	EC4297-3	2014-01-08	2015-01-07
Band Reject Filter	WRCGV 2400/2483-2390/2493-35/10SS	Wainwright	EC4297-4	2014-01-08	2015-01-07
Power sensor / Power meter	N1911A/N1921A	Agilent	EC4318	2014-04-11	2015-04-10





Spectrum analyzer	E7402A	Agilent	EC2254	2014-08-16	2015-08-15
GPS	A-10		EC4658	2013-08-13	2015-08-12
EMF meter	ELT-400	NARDA	EC2928	2014-08-05	2015-08-04
Protection Network	VDHH 9502	SCHWARZBECK	EC4631	2014-07-09	2015-07-08
Attenuator	GKTS2-2-90-8-A6	Huaxiang	EC4503	2013-12-21	2014-12-20
Attenuator	GKTS2-2-90-8-A6	Huaxiang	EC4504	2013-12-21	2014-12-20
Pulse Engine Tachometer	PET-20000XR	OPPAMA	EC4782	2013-12-09	2014-12-08
Harmonic generator	ES2000U	NF	EC 4793-1	2014-03-20	2015-03-19
Harmonic generator	ES2000B	NF	EC 4793-2	2014-03-20	2015-03-19
Function Generator	WF1974	NF	EC 4793-3	2014-03-31	2015-03-30
Function Generator	WF1974	NF	EC 4793-4	2014-03-31	2015-03-30
Function Generator	WF1974	NF	EC 4793-5	2014-03-13	2015-03-12
Function Generator	WF1974	NF	EC 4793-6	2014-03-31	2015-03-30
Time relay	-	-	EC4186-1	2014-05-05	2015-05-04
Load Resistor Box	-	-	EC4186-2	Not required	Not required
Load Resistor Box	-	-	EC4186-3	Not required	Not required
Step-up Transformer	BJZ-5KVA	Sangke	EC3268	Not required	Not required
Variable Transformer	TDGC2-2KVA	Sangke	EC3455	Not required	Not required
Data Acquisition System	DEWE-800	DEWETRON	EC4866	2013-10-30	2014-10-29
AC current probe	A100	DEWETRON	EC4866-1	2013-11-06	2014-11-05
AC current probe	A100	DEWETRON	EC4866-2	2013-11-06	2014-11-05
AC current probe	A100	DEWETRON	EC4866-3	2013-11-06	2014-11-05
DIPs generator	SKS-1130GT	SANKI	EC 5033	2014-01-06	2015-01-05
Ring wave generator	SKS-1206GB	SANKI	EC 5033-1	2014-02-21	2015-02-20
EFT generator	SKS-0404IB	SANKI	EC 5033-2	2014-01-07	2015-01-06
Surge generator	SKS-0506GB-30	SANKI	EC 5033-3	2014-02-06	2015-02-05
Vector Signal Generator	N5182B	Agilent Technologies	EC5175	2013-12-31	2014-12-30

## 2.2 Test Standard

47CFR Part 15 (2013)  
ANSI C63.4: 2003  
RSS-210 Issue 8 (December 2010)  
RSS-Gen Issue 3 (December 2010)

### 2.3 Test Summary

**This report applies to tested sample only. This report shall not be reproduced in part without written approval of Intertek Testing Service Shanghai Limited.**

TEST ITEM	FCC REFERENCE	IC REFERENCE	RESULT
Minimum 6dB Bandwidth	15.247(a)(2)	RSS-210 Issue 8 Annex 8	Pass
Maximum peak output power	15.247(b)	RSS-210 Issue 8 Annex 8	Pass
Power spectrum density	15.247(e)	RSS-210 Issue 8 Annex 8	Pass
Radiated emission	15.205 & 15.209	RSS-210 Issue 8 Clause 2	Pass
Emission outside the frequency band	15.247(d)	RSS-210 Issue 8 Annex 8	Pass
Power line conducted emission	15.207	RSS-Gen Issue 3 Clause 7.2.4	Pass
Occupied bandwidth	-	RSS-Gen Issue 3 Clause 4.6.1	Tested

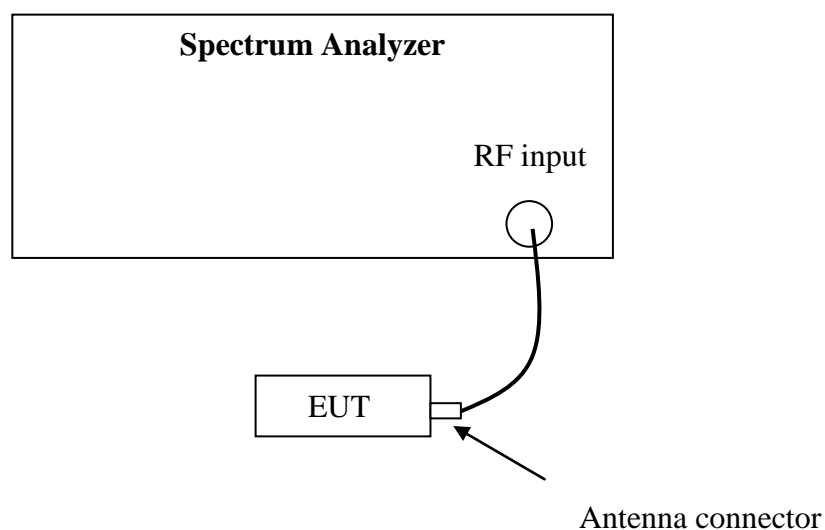
### **3. Minimum 6dB Bandwidth**

**Test result: PASS**

#### **3.1 Limit**

For systems using digital modulation techniques that may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz and 5725 - 5850 MHz bands, the minimum 6 dB bandwidth shall be at least 500 kHz.

#### **3.2 Test Configuration**



#### **3.3 Test Procedure and test setup**

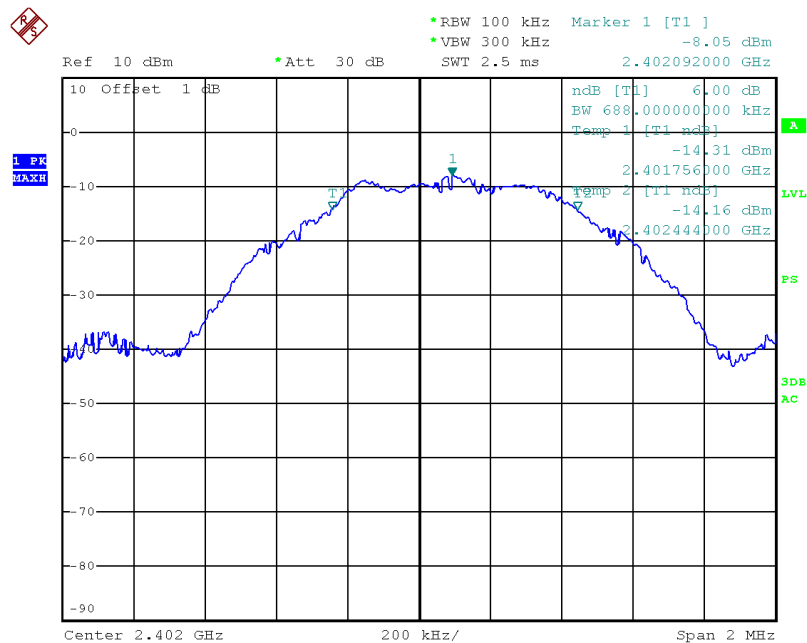
The minimum 6dB bandwidth per FCC §15.247(a)(2) is measured using the Spectrum Analyzer according to DTS test procedure of “KDB558074 D01 DTS Meas Guidance v03r02” for compliance to FCC 47CFR 15.247 requirements.

### 3.4 Test Protocol

Temperature : 25°C  
Relative Humidity : 55%

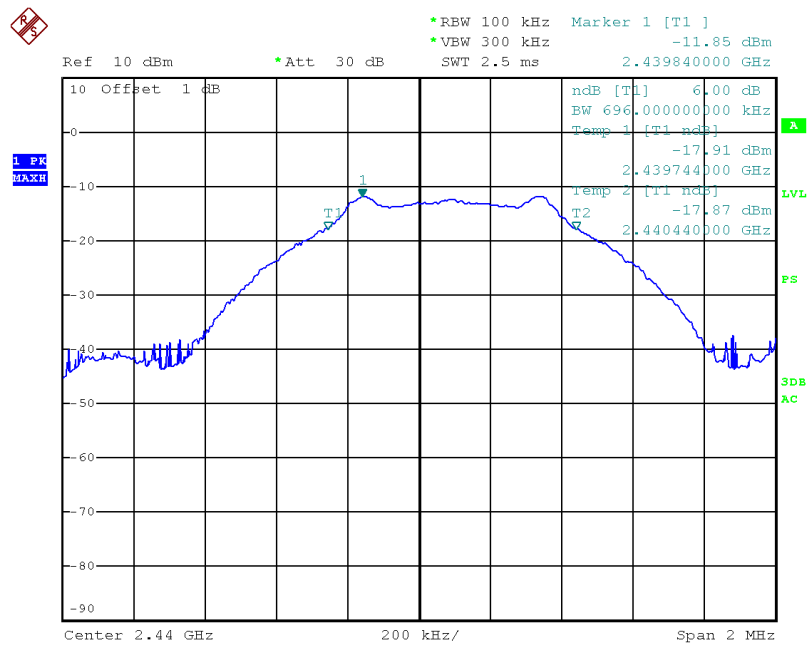
CH	Bandwidth (kHz)	Limit (MHz)
L	688.00	≥0.5
M	696.00	
H	700.00	

#### Channel L



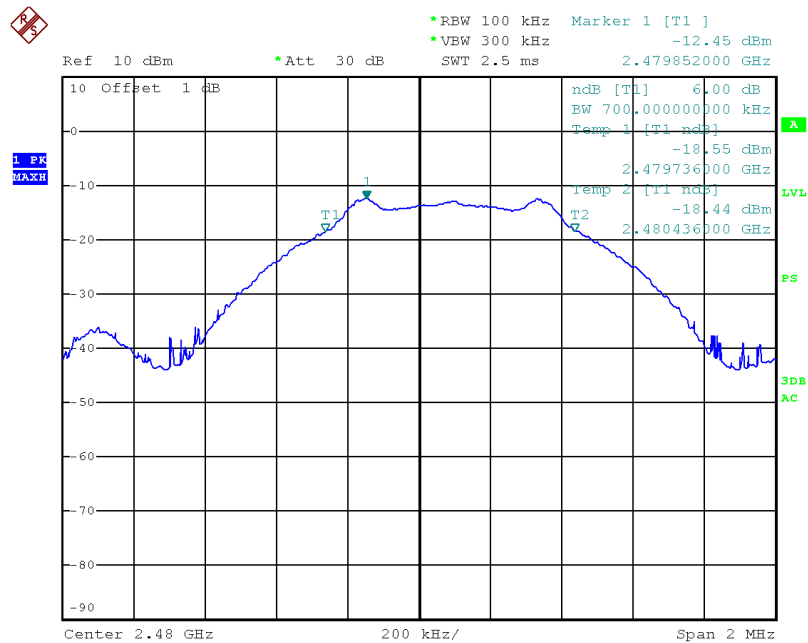
Date: 25.SEP.2014 15:51:52

### Channel M



Date: 25.SEP.2014 15:54:42

### Channel H



Date: 25.SEP.2014 15:55:39

## 4. Maximum peak output power

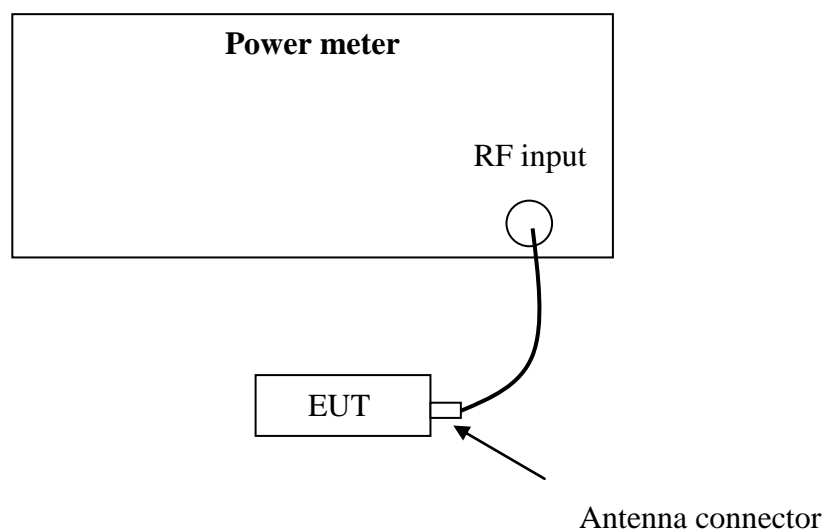
Test result: Pass

### 4.1 Test limit

- ☐ For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt
- ☐ For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts
- ☒ For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt.

If the transmitting antenna of directional gain greater than 6dBi is used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

### 4.2 Test Configuration



### 4.3 Test procedure and test setup

The EUT was tested according to DTS test procedure of “KDB558074 D01 DTS Meas Guidance v03r02” for compliance to FCC 47CFR 15.247 requirements (clause 9.1.2).

#### 4.4 Test protocol

Temperature : 25 °C

Relative Humidity : 55 %

CH	Cable loss (dB)	Conducted Power (dBm)	Limit (dBm)
L	1.00	-10.80	≤30
M	1.00	-10.53	
H	1.00	-11.30	

**Conclusion:** The maximum EIRP = -10.53dBm+3.5dBi = 0.198mW which is lower than the limit listed in RSS-210.

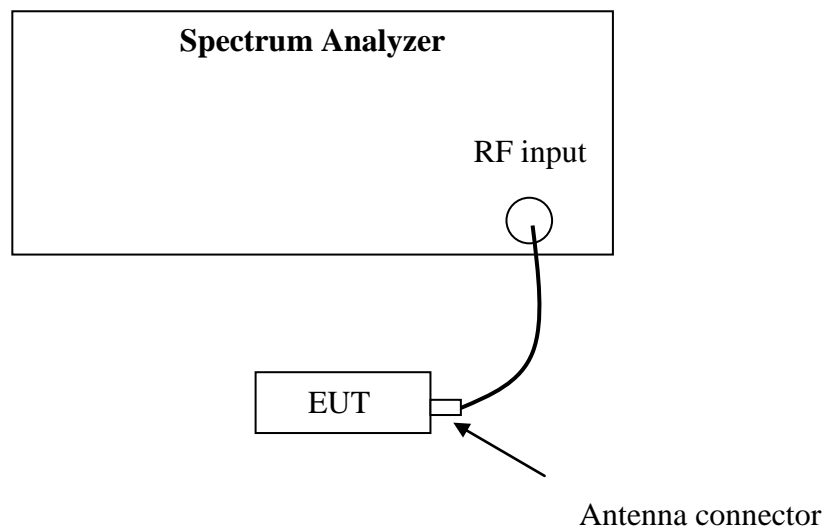
## **5. Power spectrum density**

**Test result:**      **Pass**

### **5.1 Test limit**

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission.

### **5.2 Test Configuration**



### **5.3 Test procedure and test setup**

The power output per FCC §15.247(e) was tested according to DTS test procedure of “KDB558074 D01 DTS Meas Guidance v03r02” (clause 10.2) for compliance to FCC 47CFR 15.247 requirements.



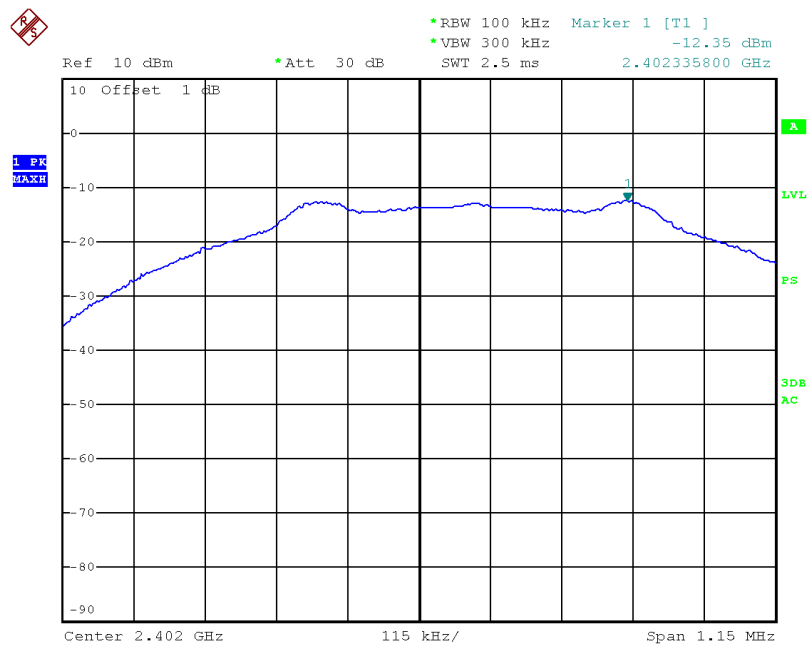
## 5.4 Test Protocol

Temperature : 25 °C

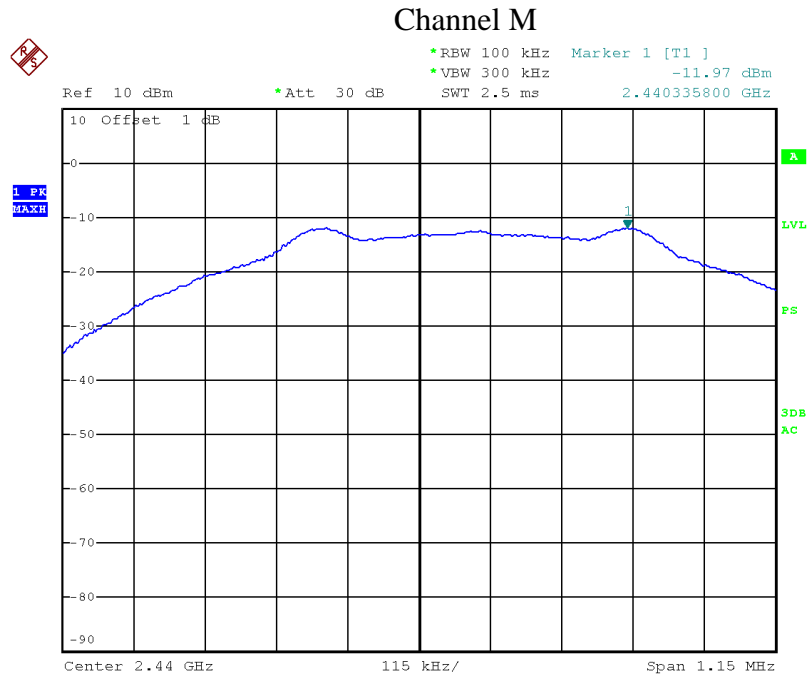
Relative Humidity: 55 %

CH	Cable loss (dB)	Spectrum Density (dBm)	RBW used for test (kHz)	Limit (dBm)
L	1.00	-12.35	100	≤8.00
M	1.00	-11.97	100	
H	1.00	-12.62	100	

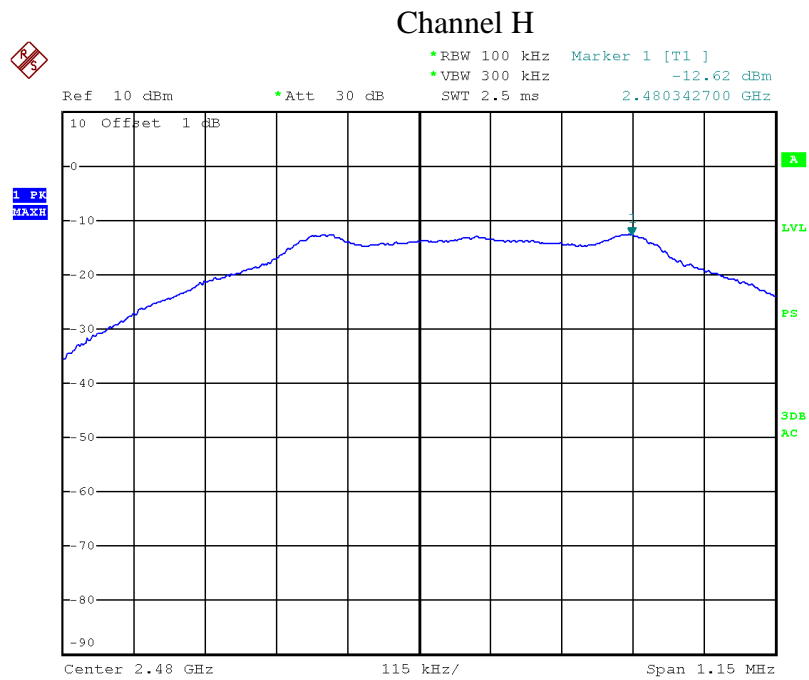
### Channel L



Date: 25.SEP.2014 16:01:45



Date: 25.SEP.2014 16:02:51



Date: 25.SEP.2014 16:03:37

## 6. Radiated emission

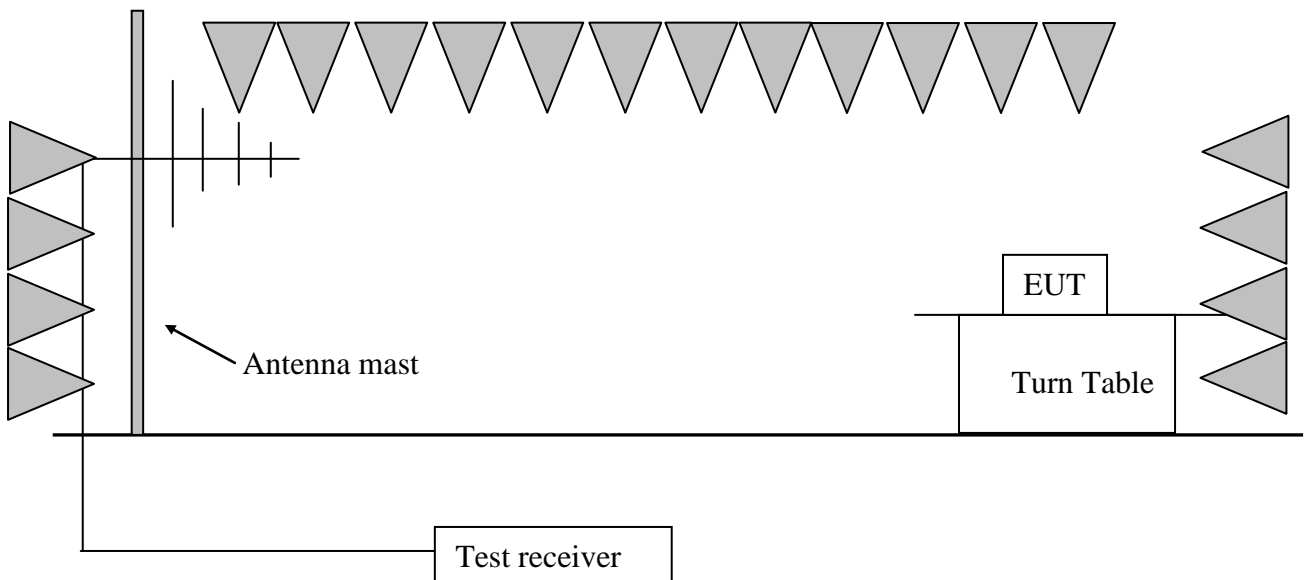
Test result: **PASS**

### 6.1 Test limit

The radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) showed as below:

Frequency (MHz)	Field Strength (dBuV/m)	Measurement Distance (m)
30 - 88	40.0	3
88 - 216	43.5	3
216 - 960	46.0	3
Above 960	54.0	3

### 6.2 Test Configuration



### **6.3 Test procedure and test setup**

The measurement was applied in a semi-anechoic chamber. While testing for spurious emission higher than 1GHz, if applied, the pre-amplifier would be equipped just at the output terminal of the antenna.

The EUT and simulators were placed on a 0.8m high wooden turntable above the horizontal metal ground plane. The turn table rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna which was mounted on an antenna mast. The antenna moved up and down between from 1meter to 4 meters to find out the maximum emission level.

The EUT was tested according to DTS test procedure of KDB558074 D01 DTS “Meas Guidance v03r02” (clause 10.2) for compliance to FCC 47CFR 15.247 requirements.

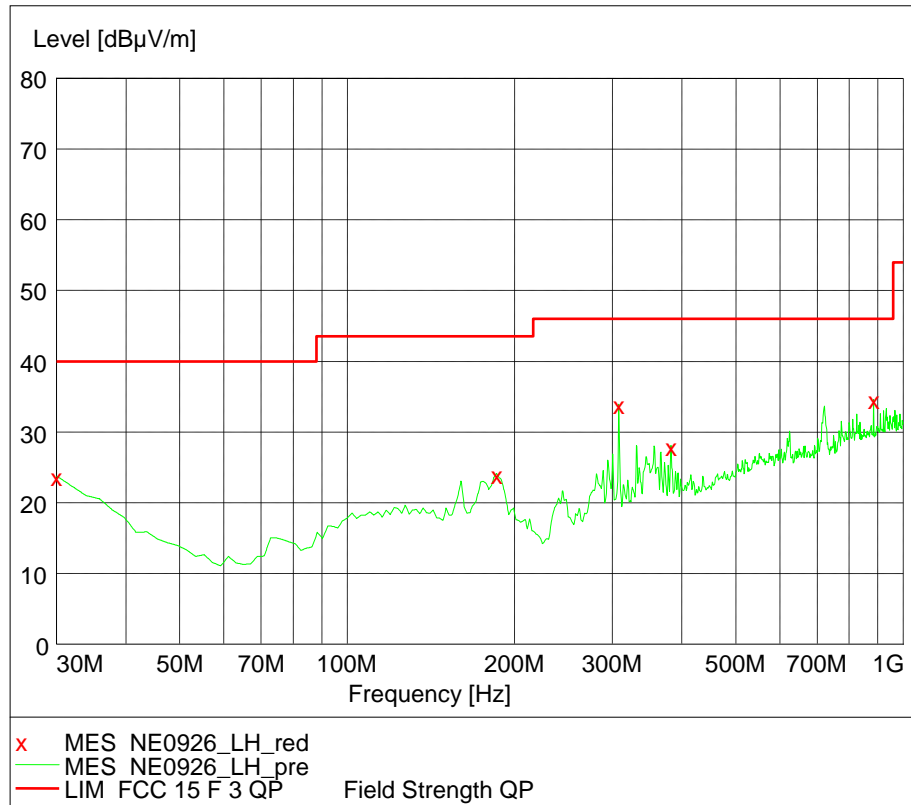
#### 6.4 Test protocol

CH	Antenna	Frequency (MHz)	Correct Factor (dB/m)	Corrected Reading (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
L	H	2402.30	30.70	88.90	Fundamental	/	PK
	H	307.25	15.60	34.30	46.00	11.70	QP
	V	307.25	15.60	37.40	46.00	8.60	QP
	V	540.80	21.60	38.20	46.00	7.80	QP
	H	4804.60	-1.50	50.50	74.00	23.50	PK
M	H	2440.40	30.70	88.40	Fundamental	/	PK
	H	307.25	15.60	34.30	46.00	11.70	QP
	V	307.25	15.60	37.40	46.00	8.60	QP
	V	540.80	21.60	38.20	46.00	7.80	QP
	H	4880.80	-1.10	50.60	74.00	23.40	PK
H	H	2480.30	30.70	83.80	Fundamental	/	PK
	H	307.25	15.60	34.30	46.00	11.70	QP
	V	307.25	15.60	37.40	46.00	8.60	QP
	V	540.80	21.60	38.20	46.00	7.80	QP
	H	4960.60	-0.80	50.30	74.00	23.70	PK

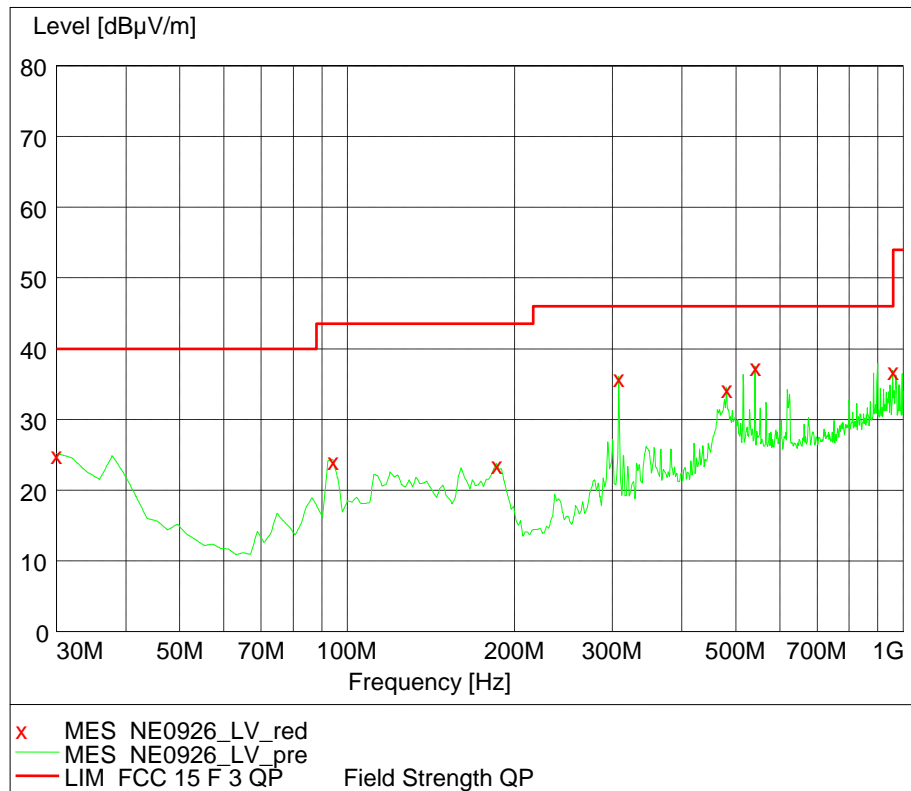
Remark: 1. Correct Factor = Antenna Factor + Cable Loss (-Amplifier, is employed)  
 2. Corrected Reading = Original Receiver Reading + Correct Factor  
 3. Margin = limit – Corrected Reading

Example: Assuming Antenna Factor = 30.20dB/m, Cable Loss = 2.00dB,  
 Gain of Preamplifier = 32.00dB, Original Receiver Reading = 10dBuV.  
 Then Correct Factor = 30.20 + 2.00 – 32.00 = 0.20dB/m; Corrected Reading =  
 10dBuV + 0.20dB/m = 10.20dBuV/m  
 Assuming limit = 54dBuV/m, Corrected Reading = 10.20dBuV/m, then Margin =  
 54 -10.20 = 43.80dBuV/m

### Horizontal



### Vertical



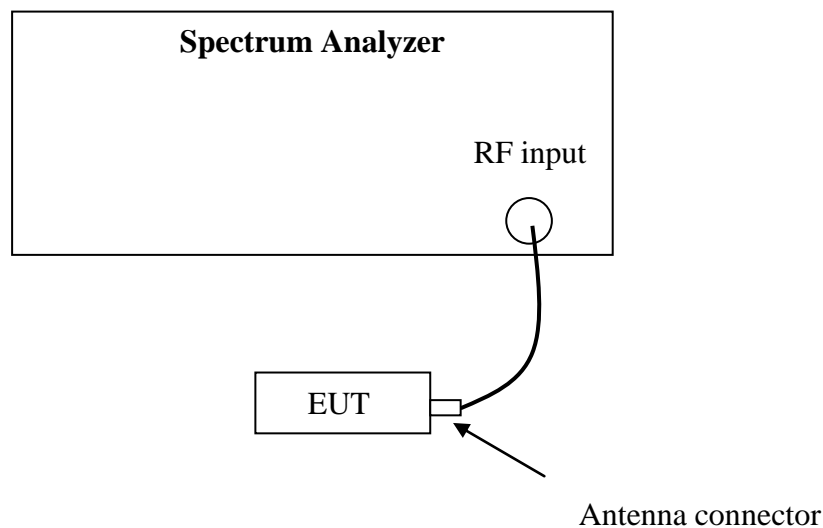
## **7. Emission outside the frequency Band**

**Test result: PASS**

### **7.1 Limit**

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

### **7.2 Test Configuration**



### **7.3 Test procedure and test setup**

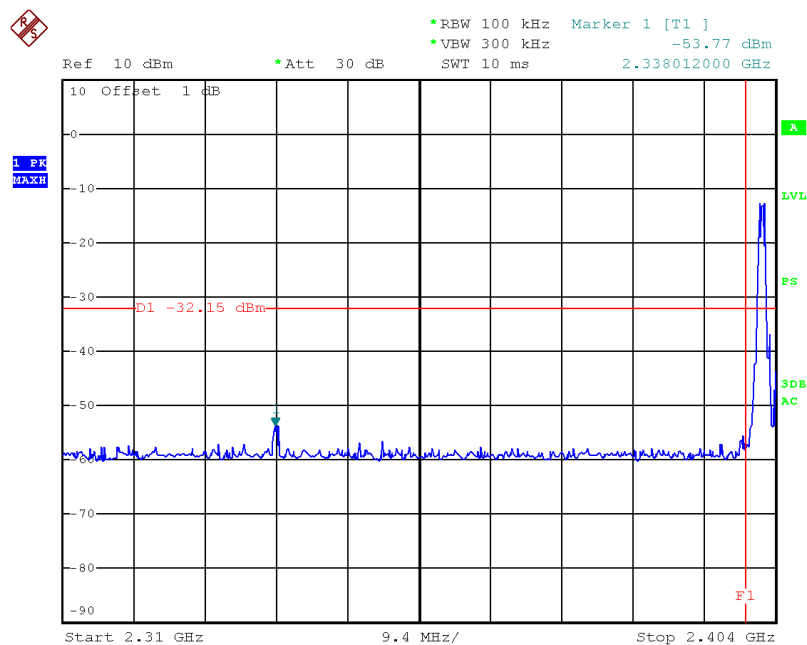
The Emission outside the frequency Band per FCC §15.247(d) is measured using the Spectrum Analyzer with the resolutions bandwidth set at 100kHz, the video bandwidth set at 300kHz, and the SPAN>>RBW.

The EUT was tested according to DTS test procedure of "KDB558074 D01 DTS Meas Guidance v03r02" (clause 11.0) for compliance to FCC 47CFR 15.247 requirements.

## 7.4 Test protocol

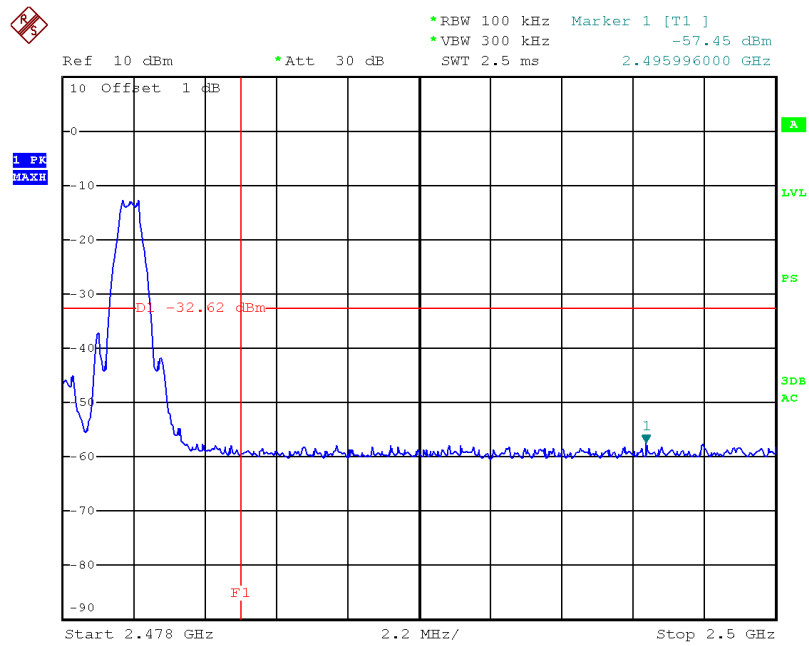
CH	Max PSD among band (dBm)	The most restrict Attenuation outside band (dB)	Limit (dB)
L	-12.35	41.42	$\geq 20$
H	-12.62	44.83	

Note: The test was performed from 9kHz to 26GHz and the graph of band edge emission is listed below.



Date: 25.SEP.2014 16:06:39





Date: 25.SEP.2014 16:11:20

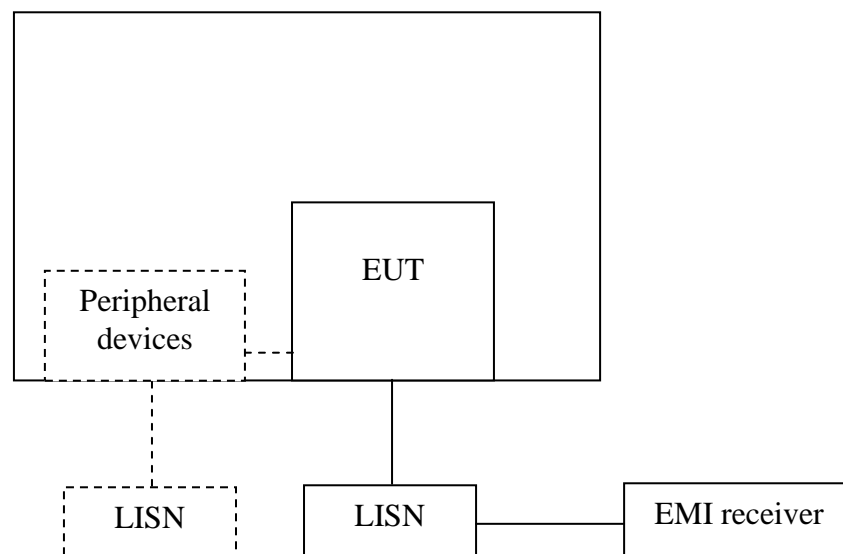
## 8. Power line conducted emission

**Test result:**        **NA**

### 8.1 Limit

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	QP	AV
0.15-0.5	66 to 56*	56 to 46 *
0.5-5	56	46
5-30	60	50
* Decreases with the logarithm of the frequency.		

### 8.2 Test configuration



- ☐ For table top equipment, wooden support is 0.8m height table
- ☐ For floor standing equipment, wooden support is 0.1m height rack.

### **8.3 Test procedure and test set up**

The EUT are connected to the main power through a line impedance stabilization network (LISN). This provides a 50 $\Omega$ /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50 $\Omega$ /50uH coupling impedance with 50 $\Omega$  termination.

Both sides (Line and Neutral) of AC line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4 on conducted measurement. The bandwidth of the test receiver is set at 9 kHz.

#### 8.4 Test protocol

Frequency	Correct Factor (dB)	Corrected Reading (dBuV)		Limit (dBuV)		Margin (dB)	
		QP	AV	QP	AV	QP	AV
Remark: 1. Correction Factor (dB) = LISN Factor (dB) + Cable Loss (dB). 2. Margin (dB) = Limit - Corrected Reading.							

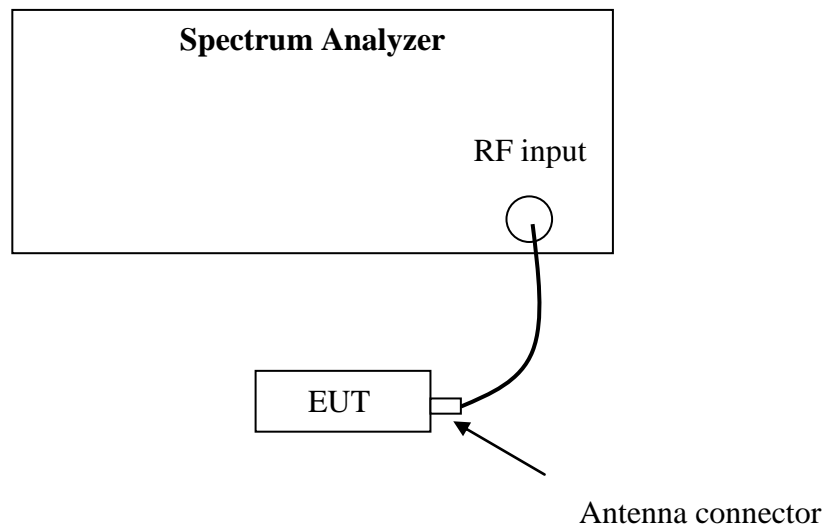
## **9. Occupied Bandwidth**

**Test Status: Tested**

### **9.1 Test limit**

None

### **9.2 Test Configuration**



### **9.3 Test procedure and test setup**

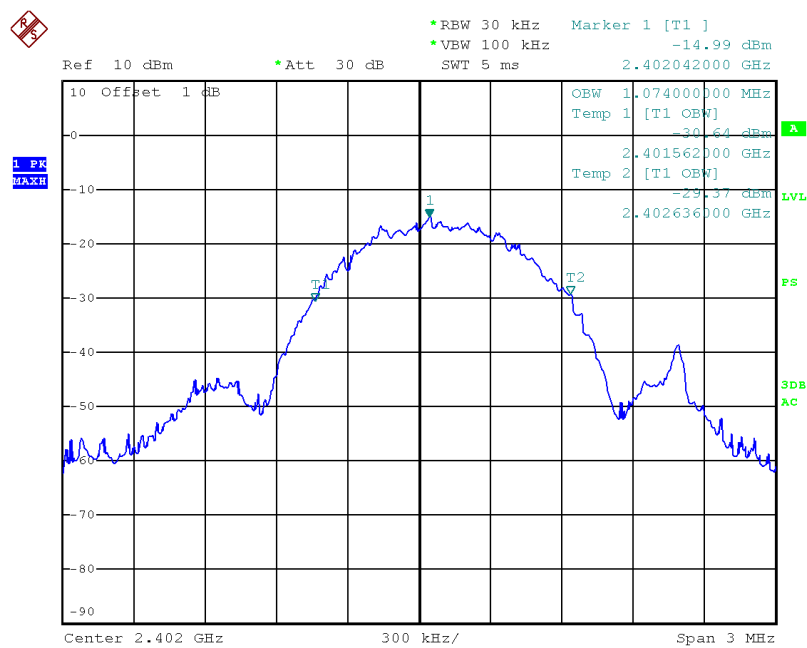
The occupied bandwidth per RSS-Gen Issue 3 Clause 4.6.1 was measured using the Spectrum Analyzer.

#### 9.4 Test protocol

Temperature : 25 °C  
 Relative Humidity : 55 %

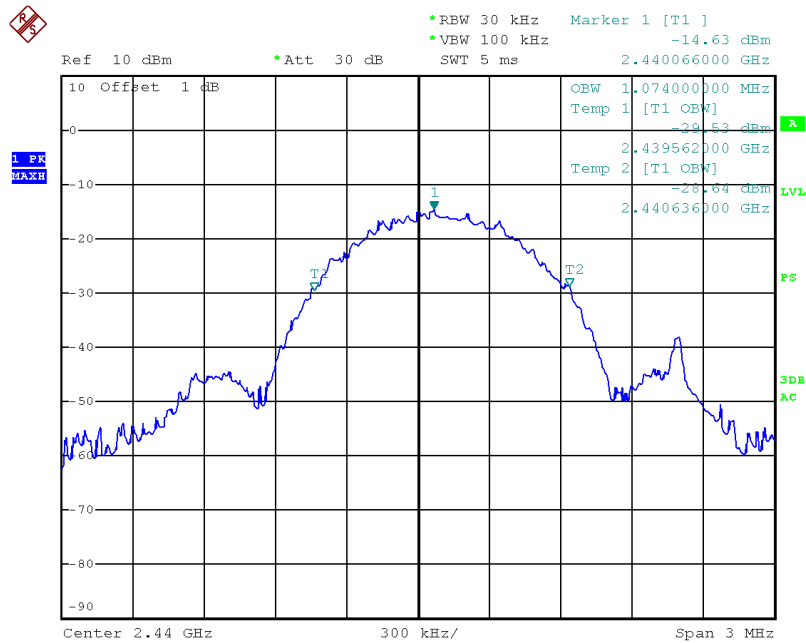
CH	99% Bandwidth (kHz)
L	1074.00
M	1074.00
H	1074.00

#### Channel L



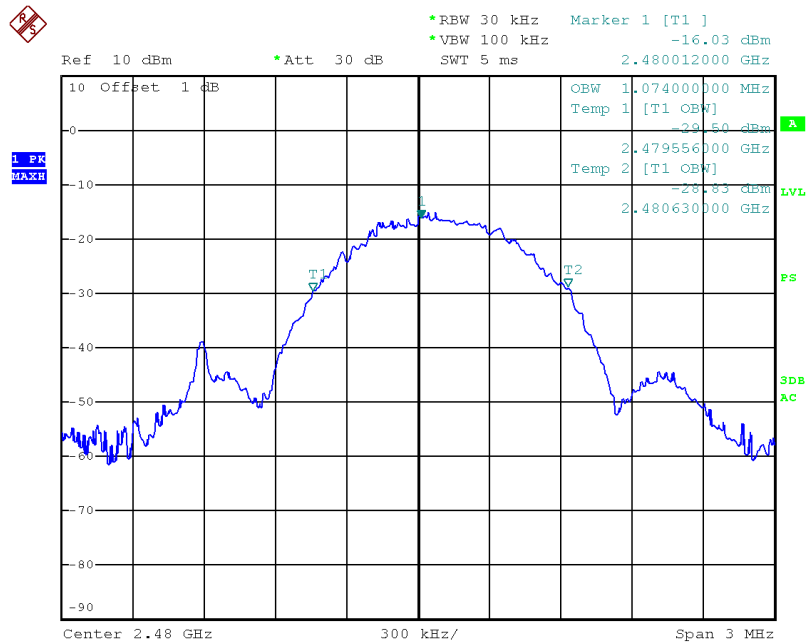
Date: 25.SEP.2014 15:59:06

### Channel M



Date: 25.SEP.2014 15:58:07

### Channel H



Date: 25.SEP.2014 15:57:14