FCC Radio Test Report

FCC ID: VJA-DLM108RJT

This report concerns (check one) : ■ **Original Grant** □ **Class I Change**

Issued Date : Jan. 10, 2011
Project No. : R1011009
Equipment : mini-PCI radio Module
Model Name : DLM108-RJT

Applicant : RAJANT CORPORATION
Address : 400 East King Street, Malvern, PA, United States 19355-3258

Tested by: Neutron Engineering Inc. EMC Laboratory
Date of Receipt: Nov. 19, 2010
Date of Test: Nov. 19, 2010 ~ Nov. 24, 2010

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Declaration

Neutron 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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Table of Contents Page

1 . CERTIFICATION 5
2 . SUMMARY OF TEST RESULTS 6
2.1 TEST FACILITY 7
2.2 MEASUREMENT UNCERTAINTY 7
3 . GENERAL INFORMATION 8
3.1 GENERAL DESCRIPTION OF EUT 8
3.2 DESCRIPTION OF TEST MODES 10
3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED 11
3.4 DESCRIPTION OF SUPPORT UNITS 12
4 . EMC EMISSION TEST 13
4.1 CONDUCTED EMISSION MEASUREMENT 13
4.1.1 POWER LINE CONDUCTED EMISSION 13
4.1.2 MEASUREMENT INSTRUMENTS LIST 13
4.1.3 TEST PROCEDURE 14
4.1.4 DEVIATION FROM TEST STANDARD 14
4.1.5 TEST SETUP 14
4.1.6 EUT OPERATING CONDITIONS 14
4.1.7 TEST RESULTS 15
4.2 RADIATED EMISSION MEASUREMENT 17
4.2.1 RADIATED EMISSION LIMITS 17
4.2.2 MEASUREMENT INSTRUMENTS LIST 18
4.2.3 TEST PROCEDURE 18
4.2.4 DEVIATION FROM TEST STANDARD 18
4.2.5 TEST SETUP 19
4.2.6 EUT OPERATING CONDITIONS 19
4.2.7 TEST RESULTS-BETWEEN 30MHZ - 1000MHZ 20
4.2.8 TEST RESULTS-ABOVE 1000MHZ 22
5 . BANDWITH TEST 46
5.1 APPLIED PROCEDURES / LIMIT 46
5.1.1 MEASUREMENT INSTRUMENTS LIST 46
5.1.2 TEST PROCEDURE 46
5.1.3 DEVIATION FROM STANDARD 46
5.1.4 TEST SETUP 46
5.1.5 EUT OPERATION CONDITIONS 46
5.1.6 TEST RESULTS 47

Table of Contents **Page**

6 . PEAK OUTPUT POWER TEST **54**
- **6.1 APPLIED PROCEDURES / LIMIT** **54**
  - **6.1.1 MEASUREMENT INSTRUMENTS LIST** **54**
  - **6.1.2 TEST PROCEDURE** **54**
  - **6.1.3 DEVIATION FROM STANDARD** **54**
  - **6.1.4 TEST SETUP** **54**
  - **6.1.5 EUT OPERATION CONDITIONS** **54**
  - **6.1.6 TEST RESULTS** **55**

7 . ANTENNA CONDUCTED SPURIOUS EMISSION **56**
- **7.1 APPLIED PROCEDURES / LIMIT** **56**
  - **7.1.1 MEASUREMENT INSTRUMENTS LIST** **56**
  - **7.1.2 TEST PROCEDURE** **56**
  - **7.1.3 DEVIATION FROM STANDARD** **56**
  - **7.1.4 TEST SETUP** **56**
  - **7.1.5 EUT OPERATION CONDITIONS** **56**
  - **7.1.6 TEST RESULTS** **57**

8 . POWER SPECTRAL DENSITY TEST **69**
- **8.1 APPLIED PROCEDURES / LIMIT** **69**
  - **8.1.1 MEASUREMENT INSTRUMENTS LIST** **69**
  - **8.1.2 TEST PROCEDURE** **69**
  - **8.1.3 DEVIATION FROM STANDARD** **69**
  - **8.1.4 TEST SETUP** **69**
  - **8.1.5 EUT OPERATION CONDITIONS** **69**
  - **8.1.6 TEST RESULTS** **70**

9 . RF EXPOSURE TEST **77**
- **9.1 APPLIED PROCEDURES / LIMIT** **77**
  - **9.1.1 MPE CALCULATION METHOD** **77**

10 . EUT TEST PHOTO **78**

1. CERTIFICATION

Equipment : mini-PCI radio Module
Brand Name : Doodle Labs
Model Name : DLM108-RJT
Applicant : RAJANT CORPORATION
Date of Test : Nov. 19, 2010 ~ Nov. 24, 2010
Standards : FCC Part15, Subpart C / ANCI C63.4 : 2003

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.
The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-R1011009) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP and TAF according to the ISO-17025 quality assessment standard and technical standard(s).

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Reference	Description	Results
Transmitter Mode (TX)		
15.207	AC Power Line Conducted Emissions	Compliant
15.203/15.247(c)	Antenna Requirement	Compliant
15.247(a)	6dB Occupied Bandw	Compliant
15.247(b)	Maximum Peak Conducted Output Power	Compliant
15.247(d), 15.205, 15.209	Spurious Radiated and Conducted Emissions	Compliant
15.247(e)	Peak Power Spectral Density and RF Exposure	Compliant

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:

C03: (VCCI RN: T-1667)
B1, No. 37, Lane 365, YangGuang St., NeiHu District 114, Taipei, Taiwan.

CB08: (VCCI RN: G-91; FCC RN: 614388; IC Assigned Code: 4428C-1)
1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

2.2 MEASUREMENT UNCERTAINTY

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**%。

The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2.

A. Conducted Measurement :

Test Site	Method	Measurement Frequency Range	U，(dB)	NOTE
C03	ANSI	150 KHz ~ 30MHz	1.94	

B. Radiated Measurement :

Test Site	Item	Measurement Frequency Range		Uncertainty	NOTE
CB08	Radiated Emission at 3m	Horizontal Polarization	30 - 200MHz	3.35 dB	
			200 - 1000MHz	3.11 dB	
			1 - 18GHz	3.97 dB	
			18 - 40GHz	4.01 dB	
		Vertical Polarization	30 - 200MHz	3.22 dB	
			200 - 1000MHz	3.24 dB	
			1 - 18GHz	4.05 dB	
			18 - 40GHz	4.04 dB	

Our calculated Measurement Instrumentation Uncertainty is shown in the tables above. These are our U_{lab} values in CISPR 16-4-2 terminology.

Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called U_{CISPR}, as follows:

Conducted Disturbance (mains port) – 150 kHz – 30 MHz : 3.6 dB

Radiated Disturbance (electric field strength on an open area test site or alternative test site) – 30 MHz – 1000 MHz : 5.2 dB

It can be seen that our U_{lab} values are smaller than U_{CISPR}.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	mini-PCI radio Module
Brand Name	Doodle Labs
Model Name	DLM108-RJT
OEM Brand/Model Name	N/A
Model Difference	N/A
Product Description	The EUT is a mini-PCI radio Module. Operation Frequency: 907~922 MHz Modulation Type: DSSS/BPSK Bit Rate of Transmitter: 11b: 11/5.5/2/1 Mbps; 11g: 54/48/36/24/18/12/9/6 Mbps Channel Bandwidth: 5/10/20M Number Of Channel: Please see Note 2. Antenna Designation: Please see Note 3. Antenna Gain(Peak): Please see Note 3. Output Power(Max): 11b: 29.14dBm (Max.); 11g: 29.70dBm (Max.) Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.
Power Source	Supplied from miniPCI Slot.
Power Rating	N/A
Connecting I/O Port(s)	Please refer to the User's Manual
Products Covered	Antenna: Please refer to the Note 3.

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	907
02	912
03	917
04	922

3. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	Pacific Wireless	OD9-5	Omni Directional	N Female	5

3.2 DESCRIPTION OF TEST MODES

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 above was evaluated respectively.

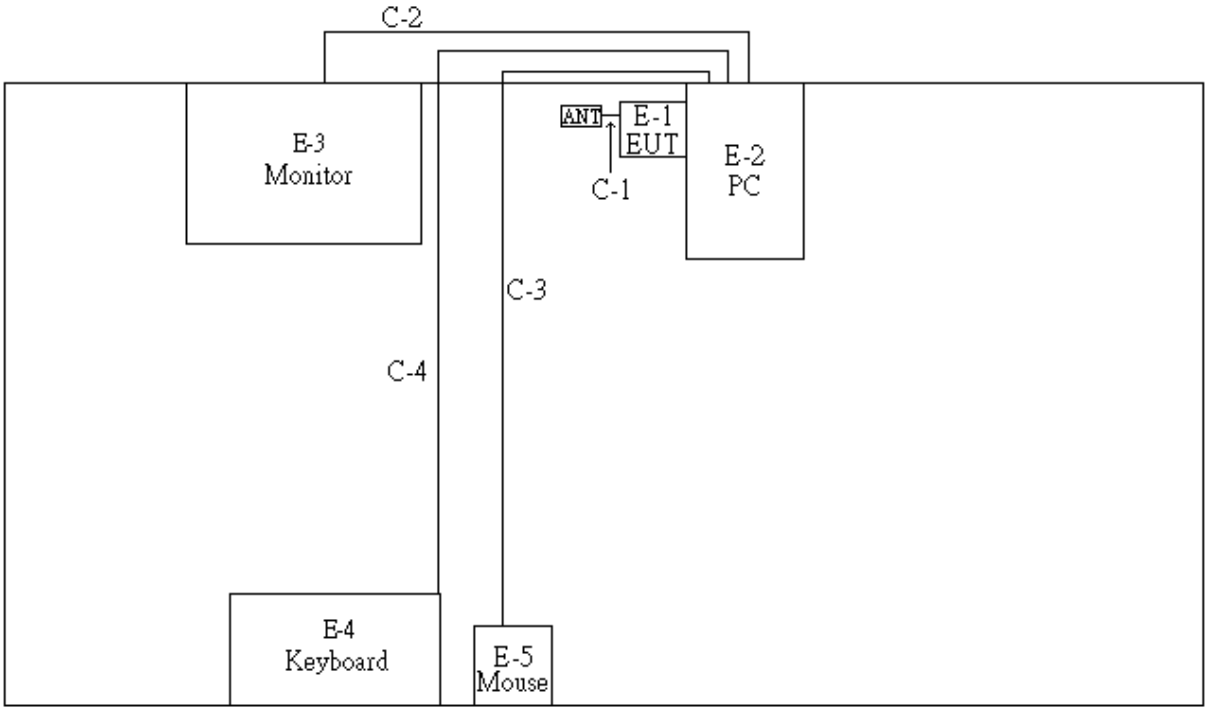
Pretest Test Mode	TX	RX	Description
Mode 1	v		907MHz
Mode 2	v		912MHz
Mode 3	v		917MHz
Mode 4	v		922MHz

For Final Conducted Test			
Final Test Mode	TX	RX	Description
Mode 1	v		TX

For Final Radiated Test < 1GHz			
Final Test Mode	TX	RX	Description
Mode 1	v		917MHz

For Final Radiated Test > 1GHz			
Final Test Mode	TX	RX	Description
Mode 1	v		907MHz
Mode 2	v		912MHz
Mode 3	v		917MHz
Mode 4	v		922MHz

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	mini-PCI radio Module	Doodle Labs	DLM108-RJT	VJA-DLM108RJT	N/A	EUT
E-2	PC	HP	HP Compaq dx7400 MT	DOC	SGH7480DKZ	
E-3	22" LCD TV Monitor	BenQ	ET-0026-NA	DOC	ETE6902198026	
E-4	USB K/B	DELL	SK-8115	DOC	E145614	
E-5	PS/2 Mouse	Logitech	M-SBF69	DOC	HCA44601156	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	YES	NO	0.2M	ANT cable
C-2	YES	YES	1.8M	Monitor D-SUB cable
C-3	YES	YES	1.7M	Mouse USB cable
C-4	YES	YES	2M	Keyboard USB cable

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

4.1.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	TWO-LINE V-NETWORK	R&S	ENV216	101050	Jun. 07, 2011
2	TWO-LINE V-NETWORK	R&S	ENV216	101051	Jun. 07, 2011
3	Test Cable	TIMES	CFD300-NL	130	Jun. 17, 2011
4	EMI Test Receiver	R&S	ESCI	100080	Mar. 10, 2011

Remark: ” N/A” denotes No Model Name , Serial No. or No Calibration specified.

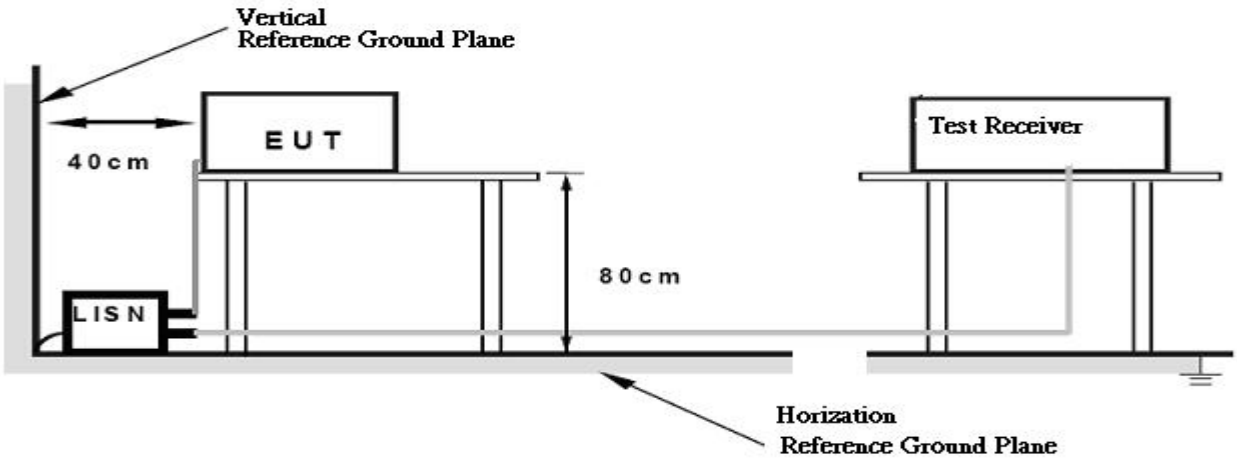
4.1.3 TEST PROCEDURE

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.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation

4.1.5 TEST SETUP



4.1.6 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.

4.1.7 TEST RESULTS

EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity：	43%
Test Voltage：	AC 120V/60Hz		
Test Mode ：	TX		

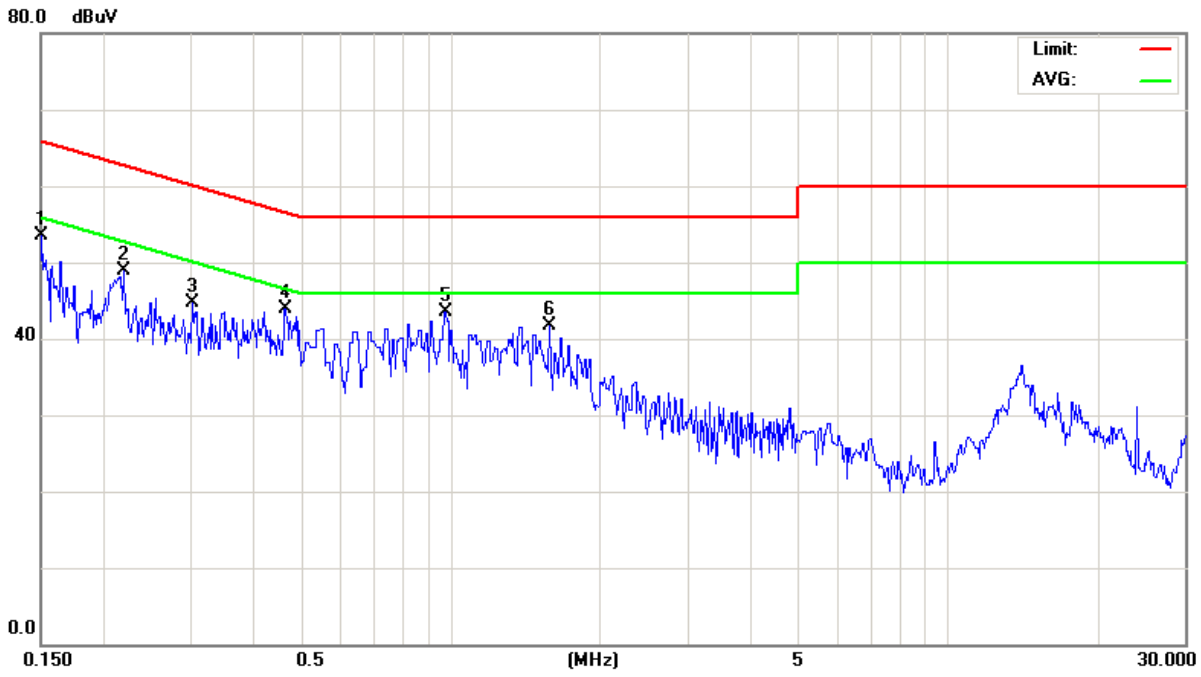
Freq.	Terminal	Reading Level(dBuV)		Correct	Measurement(dBuV)		Limit(dBuV)		Margin	Note
(MHz)	L/N	QP-Mode	AV-Mode	Factor(dB)	QP-Mode	AV-Mode	QP-Mode	AV-Mode	(dB)	
0.1507	Line	43.85	*	9.69	53.54	*	65.96	55.96	-12.42	(QP)
0.2200	Line	39.30	*	9.69	48.99	*	62.82	52.82	-13.83	(QP)
0.3026	Line	35.11	*	9.69	44.80	*	60.17	50.17	-15.37	(QP)
0.4643	Line	34.19	*	9.69	43.88	*	56.62	46.62	-12.74	(QP)
0.9770	Line	33.81	*	9.79	43.60	*	56.00	46.00	-12.40	(QP)
1.5800	Line	31.87	*	9.74	41.61	*	56.00	46.00	-14.39	(QP)

Remark

(1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz；SPA setting in RBW=10KHz,VBW =10KHz, Swp. Time = 0.2 sec./MHz。Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=10KHz,VBW=10KHz, Swp. Time =0.2 sec./MHz。

(2) 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。

(3) Measuring frequency range from 150KHz to 30MHz。



EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity：	43%
Test Voltage：	AC 120V/60Hz		
Test Mode ：	TX		

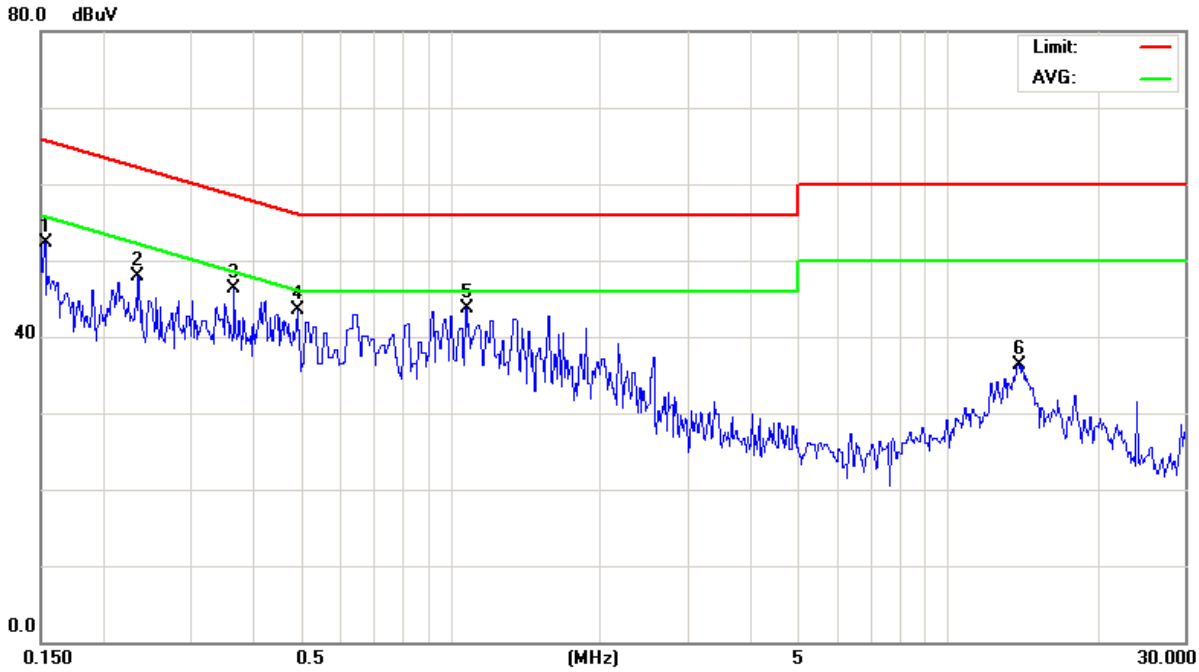
Freq. (MHz)	Terminal L/N	Reading Level(dBuV) QP-Mode	Reading Level(dBuV) AV-Mode	Correct Factor(dB)	Measurement(dBuV) QP-Mode	Measurement(dBuV) AV-Mode	Limit(dBuV) QP-Mode	Limit(dBuV) AV-Mode	Margin (dB)	Note
0.1527	Neutral	42.70	*	9.68	52.38	*	65.85	55.85	-13.47	(QP)
0.2353	Neutral	38.28	*	9.68	47.96	*	62.26	52.26	-14.30	(QP)
0.3669	Neutral	36.62	*	9.68	46.30	*	58.57	48.57	-12.27	(QP)
0.4901	Neutral	33.89	*	9.68	43.57	*	56.17	46.17	-12.60	(QP)
1.0759	Neutral	34.01	*	9.77	43.78	*	56.00	46.00	-12.22	(QP)
13.8500	Neutral	26.41	*	9.87	36.28	*	60.00	50.00	-23.72	(QP)

Remark

(1) Reading in which marked as QP means measurements by using are Quasi-Peak Mode with Detector BW=9KHz；SPA setting in RBW=10KHz,VBW =10KHz, Swp. Time = 0.2 sec./MHz。Reading in which marked as AV means measurements by using are Average Mode with instrument setting in RBW=10KHz,VBW=10KHz, Swp. Time =0.2 sec./MHz。

(2) 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。

(3) Measuring frequency range from 150KHz to 30MHz。



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on15.205(a), then the 15.209(a) limit in the table below has to be followed.

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
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (dBuV/m) (at 3m)		Class B (dBuV/m) (at 3m)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15B.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

4.2.2 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Aug. 31, 2011
2	Horn Antenna	Schwarzbeck	BBHA 9120	D-325	Dec. 15, 2010
3	Microwave Pre_amplifier	Agilent	8449B	3008A01714	Apr. 20, 2011
4	Microflex Cable	N/A	N/A	1m	May. 19, 2011
5	Microflex Cable	AISI	S104-SMAP-1	10m	Aug. 22, 2011
6	Microflex Cable	N/A	N/A	3m	Aug. 22, 2011
7	Test Cable	N/A	LMR-400	966_12m	Jun. 17, 2011
8	Test Cable	N/A	LMR-400	966_3m	Jun. 17, 2011
9	Pre-Amplifier	EMC	EMC-330	980001	Jun. 03, 2011
10	Log-Bicon Antenna	Schwarzbeck	VULB9168-352	9168-352	Jun. 17, 2011

Remark: ” N/A” denotes No Model Name / Serial No. and No Calibration specified.

4.2.3 TEST PROCEDURE

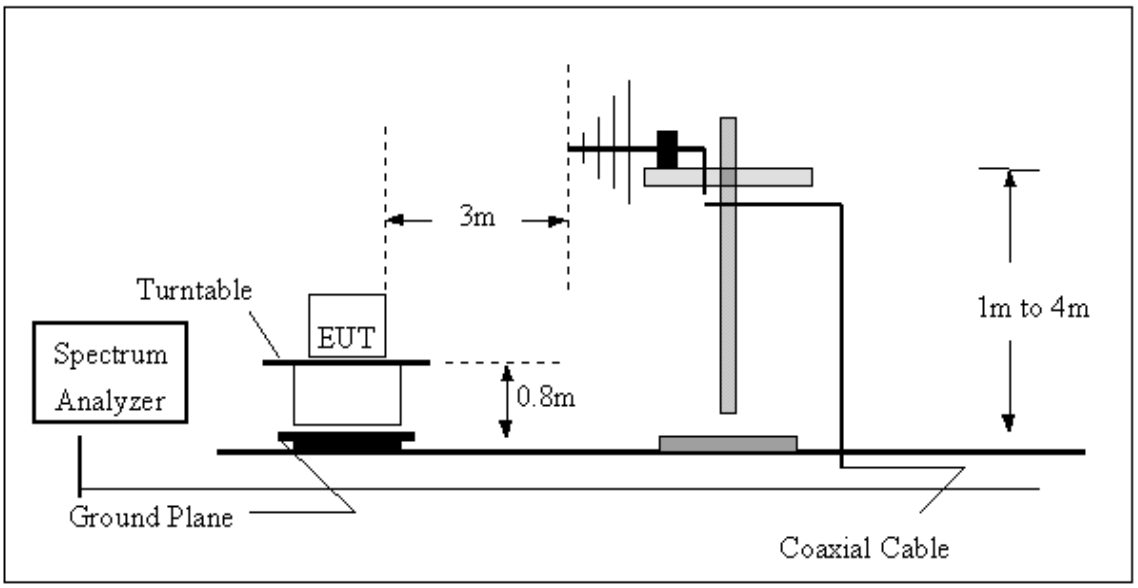
a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m Semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
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 Quasi Peak 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 testing follows the guidelines in ANSI C63.4-2003 and FCC Public Notice DA 00-705 Measurement Guidelines. In case the emission is fail due to the used RBW / VBW is too wide, marker-delta method of FCC Public Notice DA 00-705 will be followed.

4.2.4 DEVIATION FROM TEST STANDARD

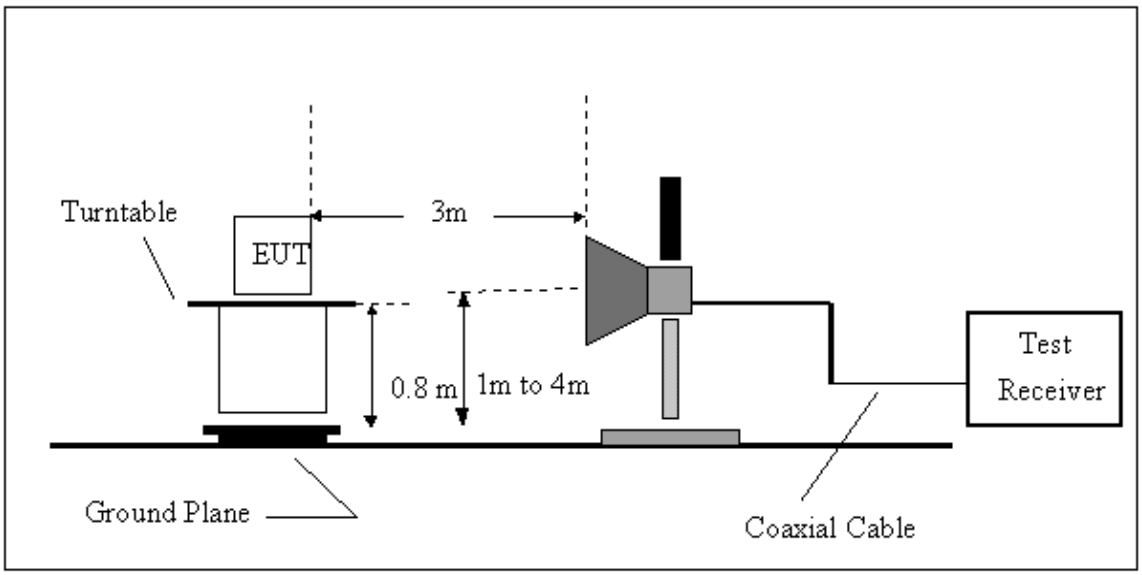
No deviation

4.2.5 TEST SETUP

(A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



4.2.6 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.

4.2.7 TEST RESULTS-BETWEEN 30MHZ - 1000MHZ

EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity :	51%
Test Voltage：	AC 120V/60Hz		
Test Mode ：	TX 917MHz		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
185.20	V	28.62	12.59	41.21	43.50	- 2.29	
233.70	V	31.30	12.88	44.18	46.00	- 1.82	
332.64	V	23.44	16.12	39.56	46.00	- 6.44	
464.56	V	22.85	19.33	42.18	46.00	- 3.82	
522.76	V	22.10	20.33	42.43	46.00	- 3.57	
580.96	V	22.24	21.57	43.81	46.00	- 2.19	

Remark：

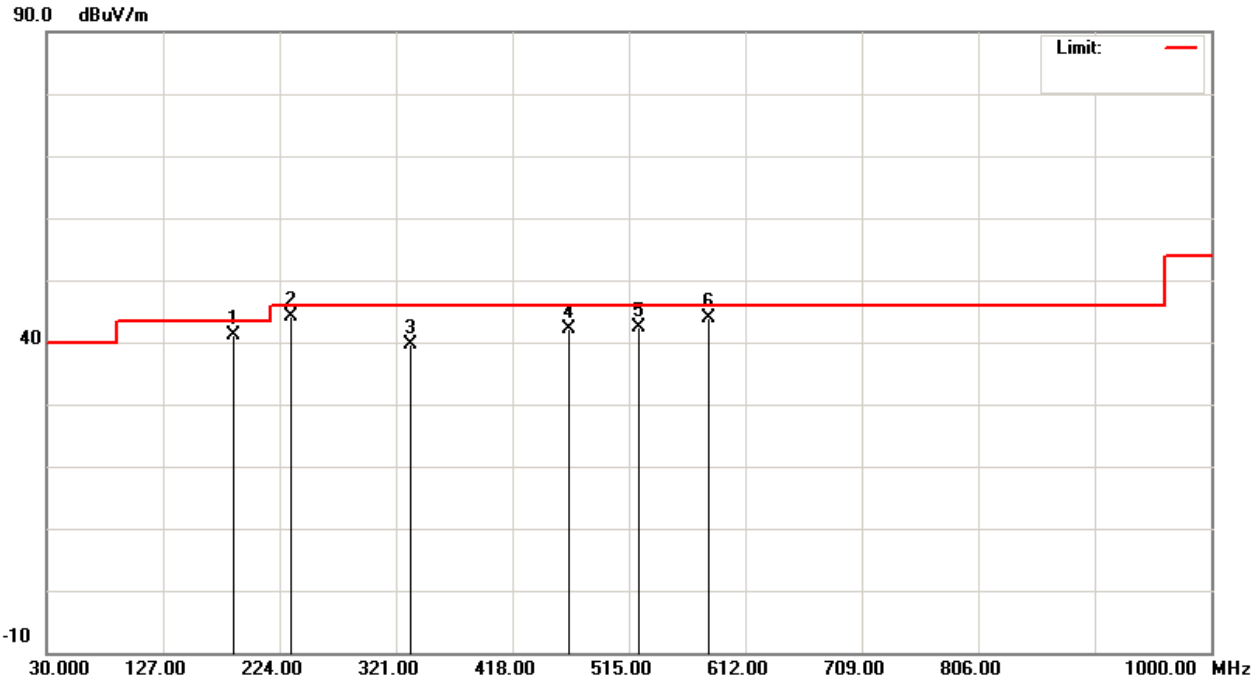
(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) 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。

(3) 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.

(4) 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 。

(5) 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.



EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity :	51%
Test Voltage：	AC 120V/60Hz		
Test Mode ：	TX 917MHz		

Freq. (MHz)	Ant. H/V	Reading(RA) (dBuV)	Corr.Factor(CF) (dB)	Measured(FS) (dBuV/m)	Limits(QP) (dBuV/m)	Margin (dB)	Note
144.46	H	26.91	14.50	41.41	43.50	- 2.09	
266.68	H	29.61	14.26	43.87	46.00	- 2.13	
340.40	H	27.63	16.31	43.94	46.00	- 2.06	
423.82	H	25.18	18.38	43.56	46.00	- 2.44	
466.50	H	23.81	19.37	43.18	46.00	- 2.82	
563.50	H	22.63	21.14	43.77	46.00	- 2.23	

Remark：

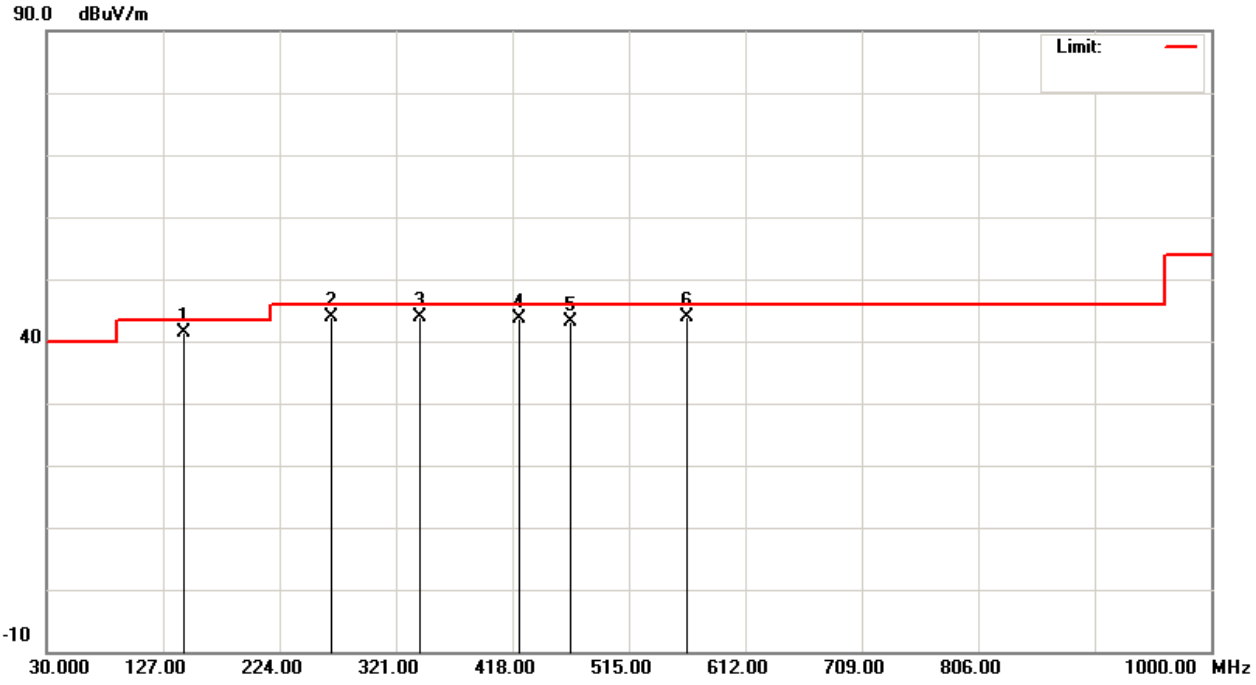
(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) 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。

(3) 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.

(4) 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 。

(5) 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.



4.2.8 TEST RESULTS-ABOVE 1000MHZ

EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity :	51%
Test Voltage :	AC 120V/60Hz		
Test Mode ：	TX 907MHz_11G 5MHz		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
1813.84	V	75.80	*	-5.15	70.65	*	74.00	54.00	X/H
2720.20	V	59.90	39.65	-2.48	57.42	37.17	74.00	54.00	X/H
1813.76	H	60.37	*	-5.15	55.22	*	74.00	54.00	X/H
2719.88	H	54.22	35.90	-2.48	51.74	33.42	74.00	54.00	X/H

Remark：

(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) 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。

(3) 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. (This judgment method includes the Band Edge Requirement.)

(4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

(5) 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.

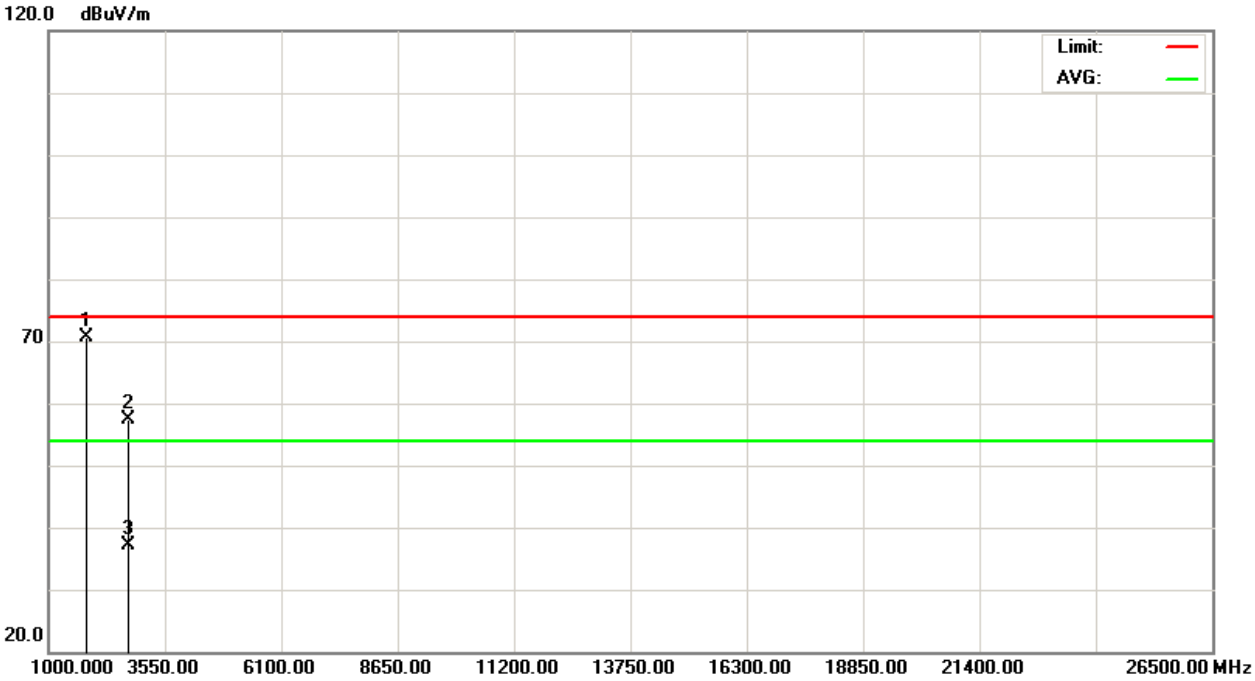
(6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(7) EUT Orthogonal Axes：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

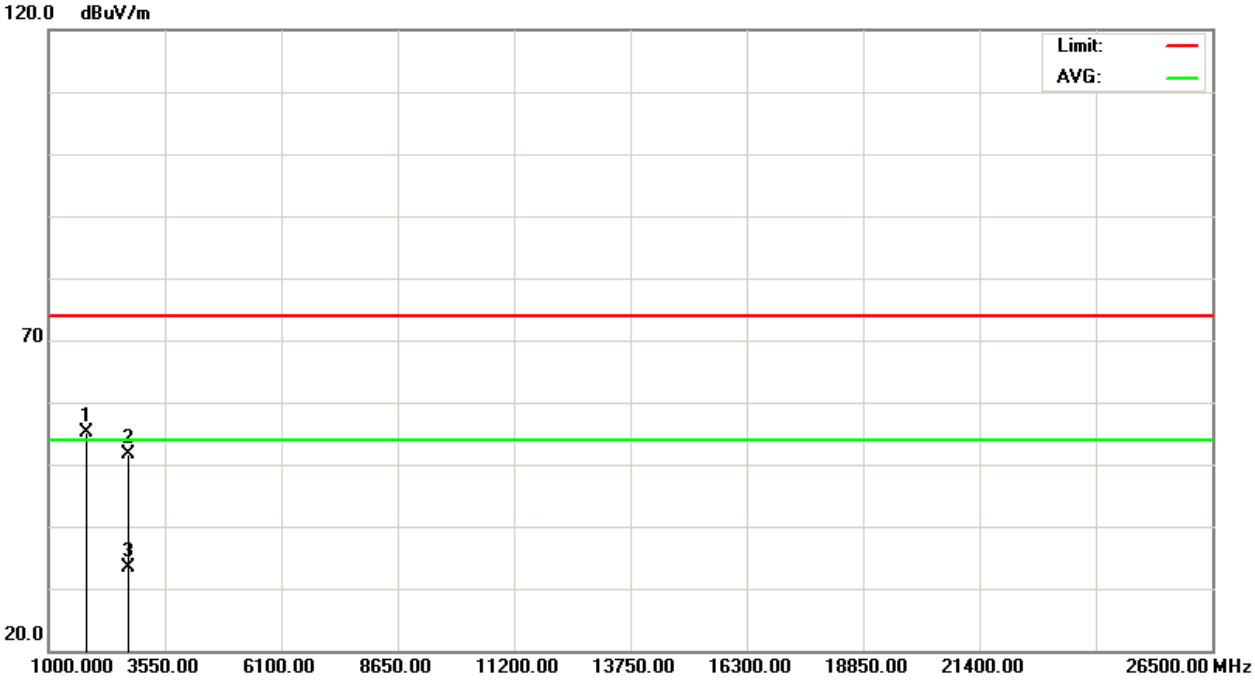
(8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis：X

TX 907MHz_11G 5MHz (Above 1000 MHz, Vertical)



TX 907MHz_11G 5MHz (Above 1000 MHz, Horizontal)



EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity :	51%
Test Voltage :	AC 120V/60Hz		
Test Mode ：	TX 907MHz_11G 10MHz		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
1809.34	V	66.72	*	-5.16	61.56	*	74.00	54.00	X/H
2417.76	V	54.80	37.20	-2.48	52.32	34.72	74.00	54.00	X/H
1811.80	H	61.33	*	-5.16	56.17	*	74.00	54.00	X/H
2718.60	H	64.62	44.65	-2.48	62.14	42.17	74.00	54.00	X/H

Remark：

(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) 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。

(3) 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. (This judgment method includes the Band Edge Requirement.)

(4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

(5) 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.

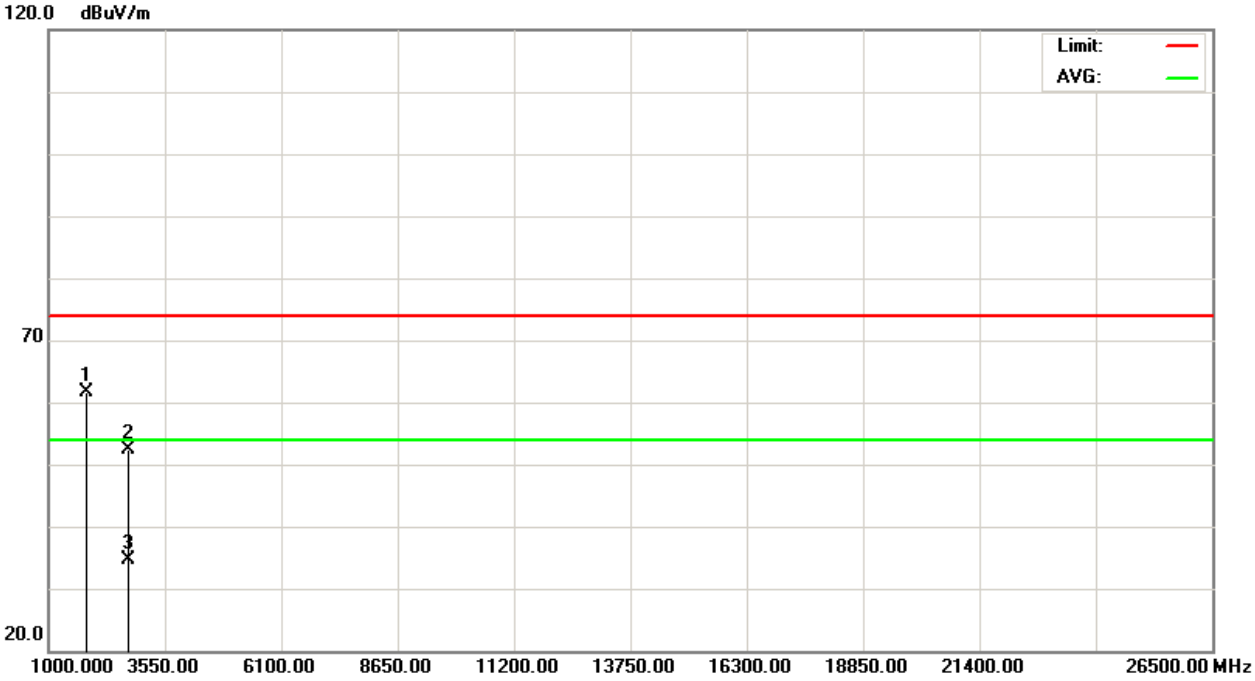
(6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(7) EUT Orthogonal Axes：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

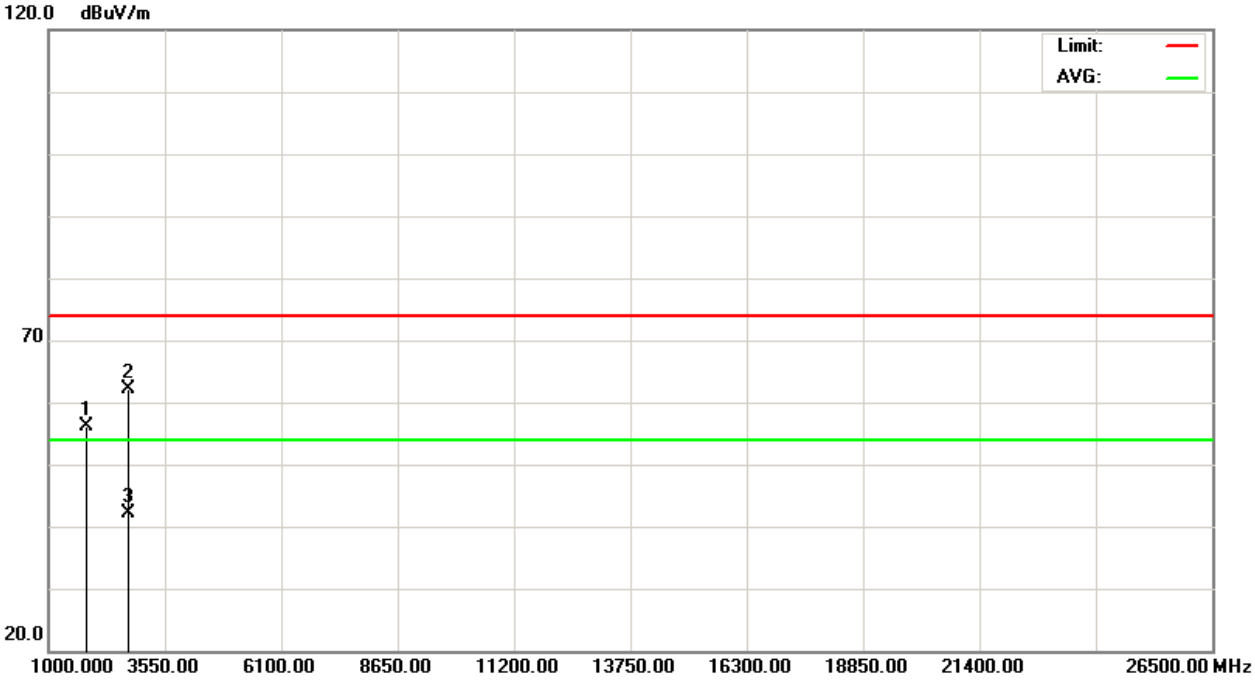
(8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis：X

TX 907MHz_11G 10MHz (Above 1000 MHz, Vertical)



TX 907MHz_11G 10MHz (Above 1000 MHz, Horizontal)



EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity :	51%
Test Voltage :	AC 120V/60Hz		
Test Mode ：	TX 912MHz_11B 20MHz		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
1823.95	V	73.50	*	-5.13	68.37	*	74.00	54.00	X/H
2740.66	V	58.85	54.74	-2.50	56.35	52.24	74.00	54.00	X/H
1823.93	H	58.44	*	-5.13	53.31	*	74.00	54.00	X/H
2740.64	H	55.58	50.86	-2.50	53.08	48.36	74.00	54.00	X/H

Remark：

(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) 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。

(3) 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. (This judgment method includes the Band Edge Requirement.)

(4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

(5) 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.

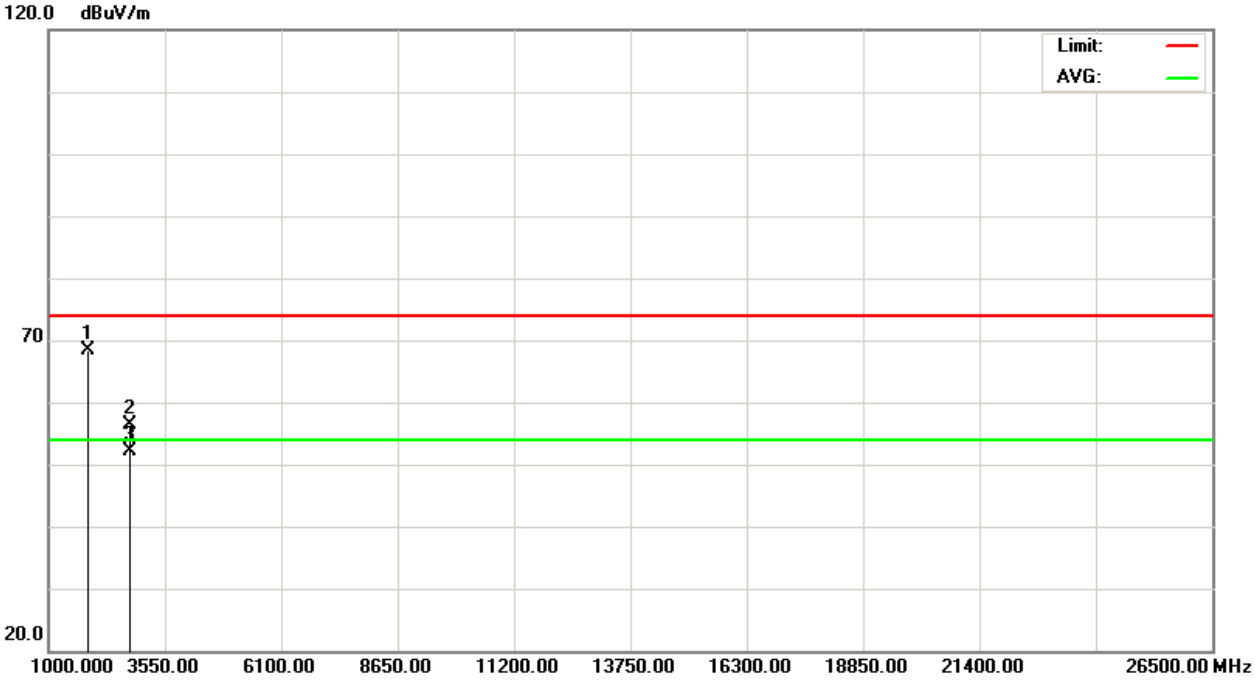
(6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(7) EUT Orthogonal Axes：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

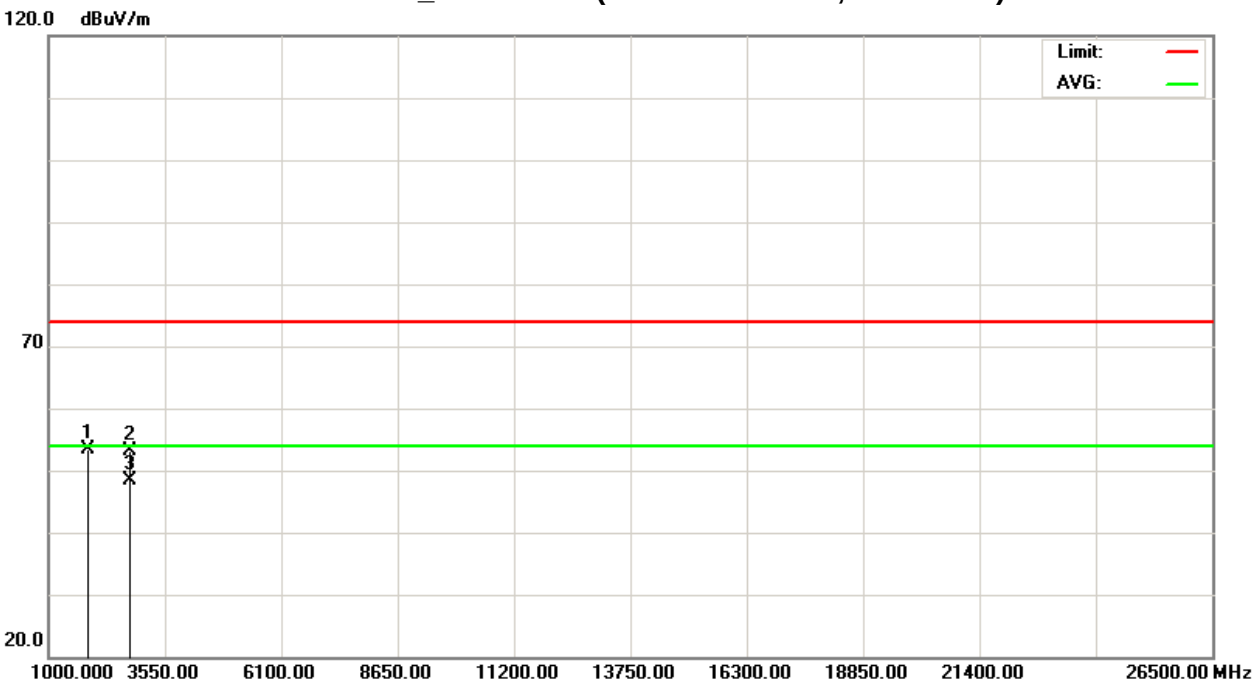
(8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis：X

TX 912MHz_11B 20MHz (Above 1000 MHz, Vertical)



TX 912MHz_11B 20MHz (Above 1000 MHz, Horizontal)



EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity :	51%
Test Voltage :	AC 120V/60Hz		
Test Mode ：	TX 912MHz_11G 5MHz		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
1824.04	V	73.61	*	-5.13	68.48	*	74.00	54.00	X/H
2736.56	V	56.69	38.84	-2.50	54.19	36.34	74.00	54.00	X/H
1824.28	H	55.98	*	-5.13	50.85	*	74.00	54.00	X/H
2736.92	H	51.96	35.04	-2.50	49.46	32.54	74.00	54.00	X/H

Remark：

(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) 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。

(3) 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. (This judgment method includes the Band Edge Requirement.)

(4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

(5) 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.

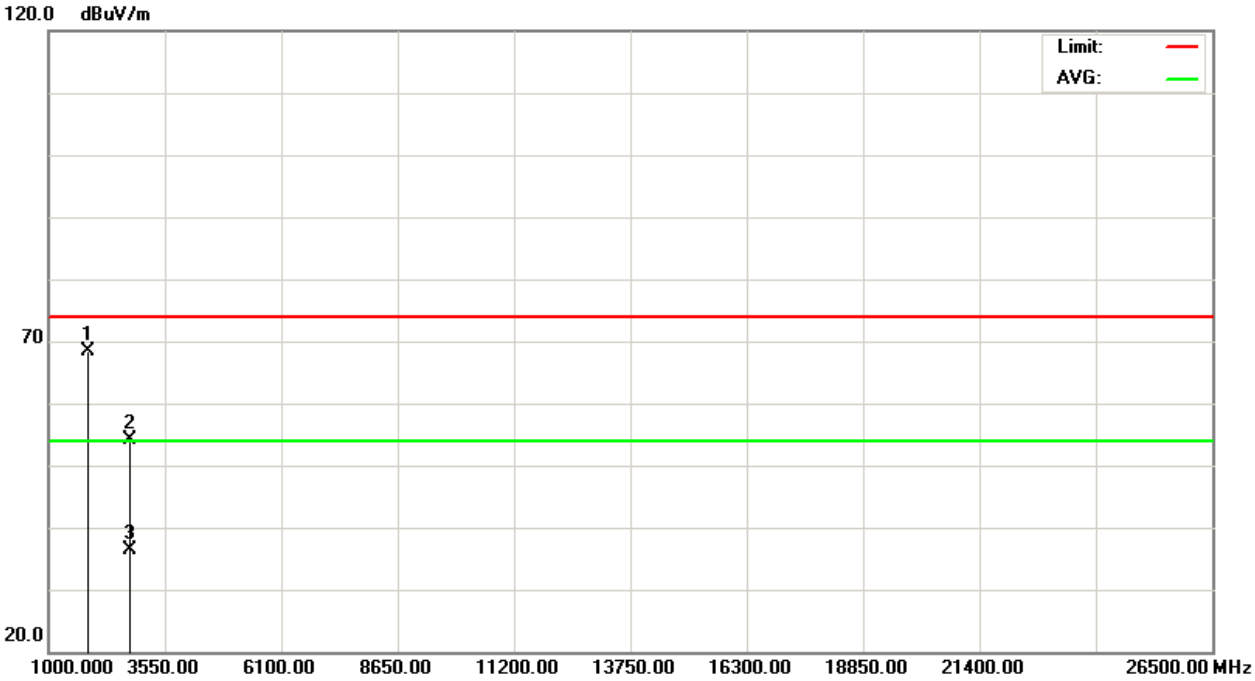
(6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(7) EUT Orthogonal Axes：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

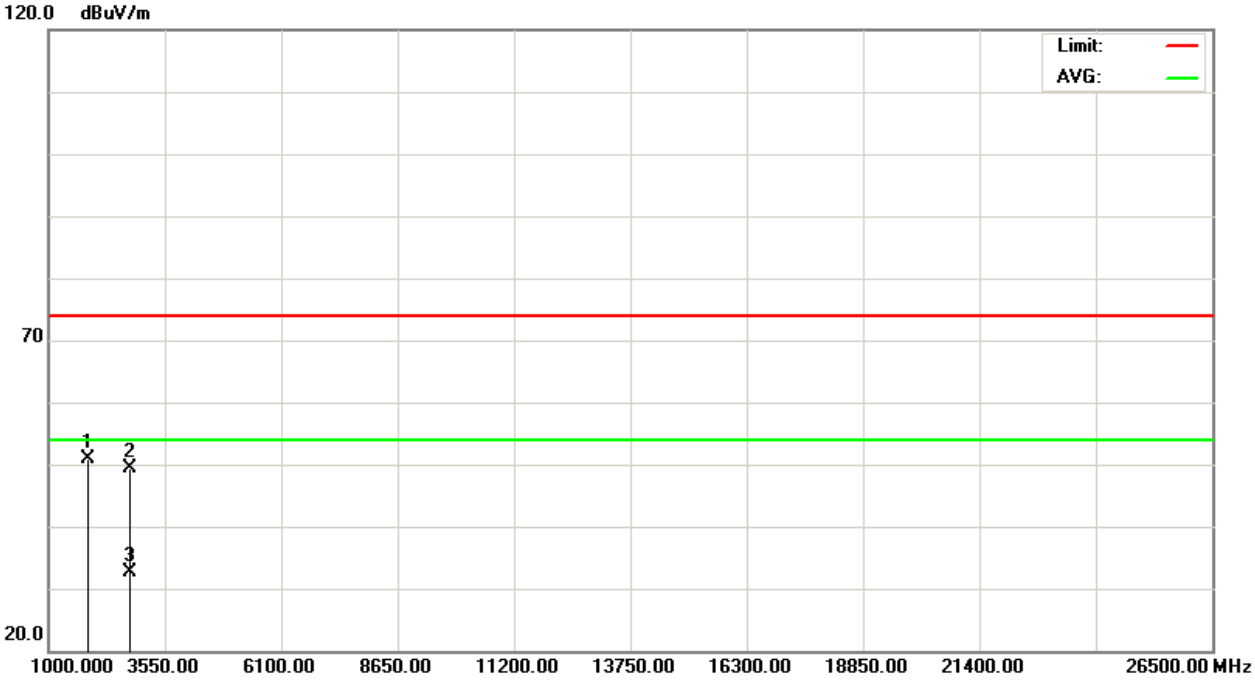
(8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis：X

TX 912MHz_11G 5MHz (Above 1000 MHz, Vertical)



TX 912MHz_11G 5MHz (Above 1000 MHz, Horizontal)



EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity :	51%
Test Voltage :	AC 120V/60Hz		
Test Mode ：	TX 912MHz_11G 10MHz		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
1824.40	V	71.68	*	-5.13	66.55	*	74.00	54.00	X/H
2739.34	V	51.70	35.39	-2.50	49.20	32.89	74.00	54.00	X/H
1823.56	H	56.31	*	-5.13	51.18	*	74.00	54.00	X/H
2738.60	H	48.52	33.77	-2.50	46.02	31.27	74.00	54.00	X/H

Remark：

(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) 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。

(3) 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. (This judgment method includes the Band Edge Requirement.)

(4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

(5) 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.

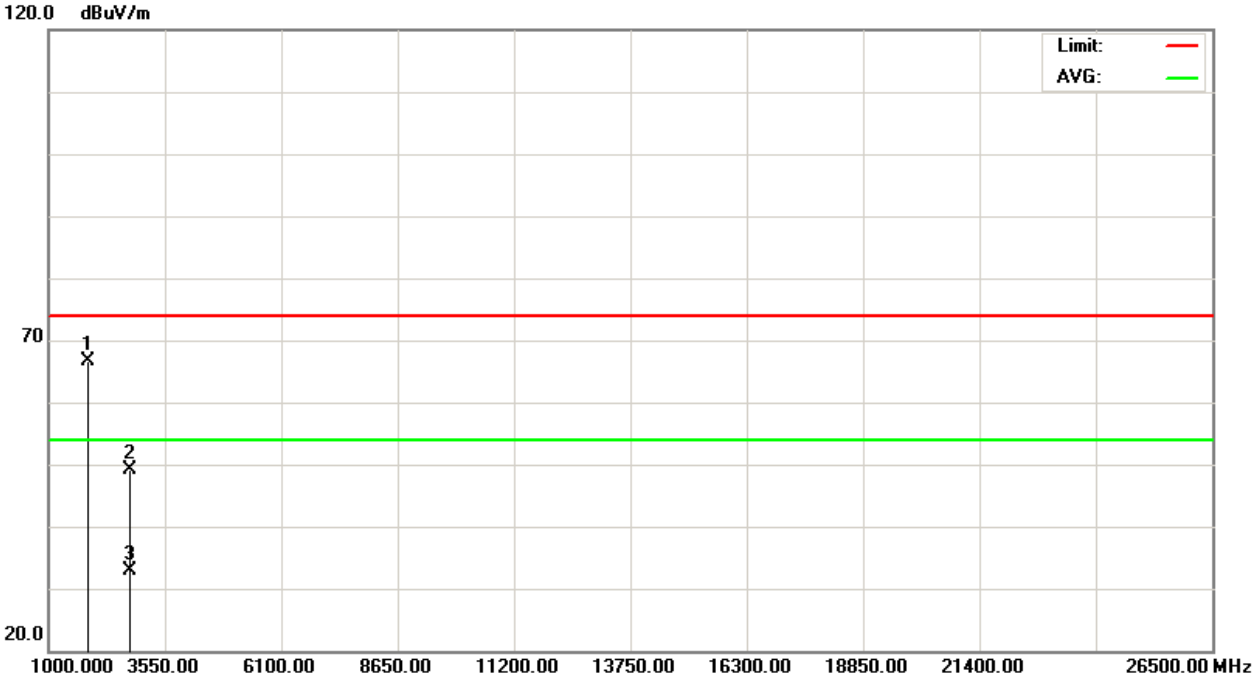
(6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(7) EUT Orthogonal Axes：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

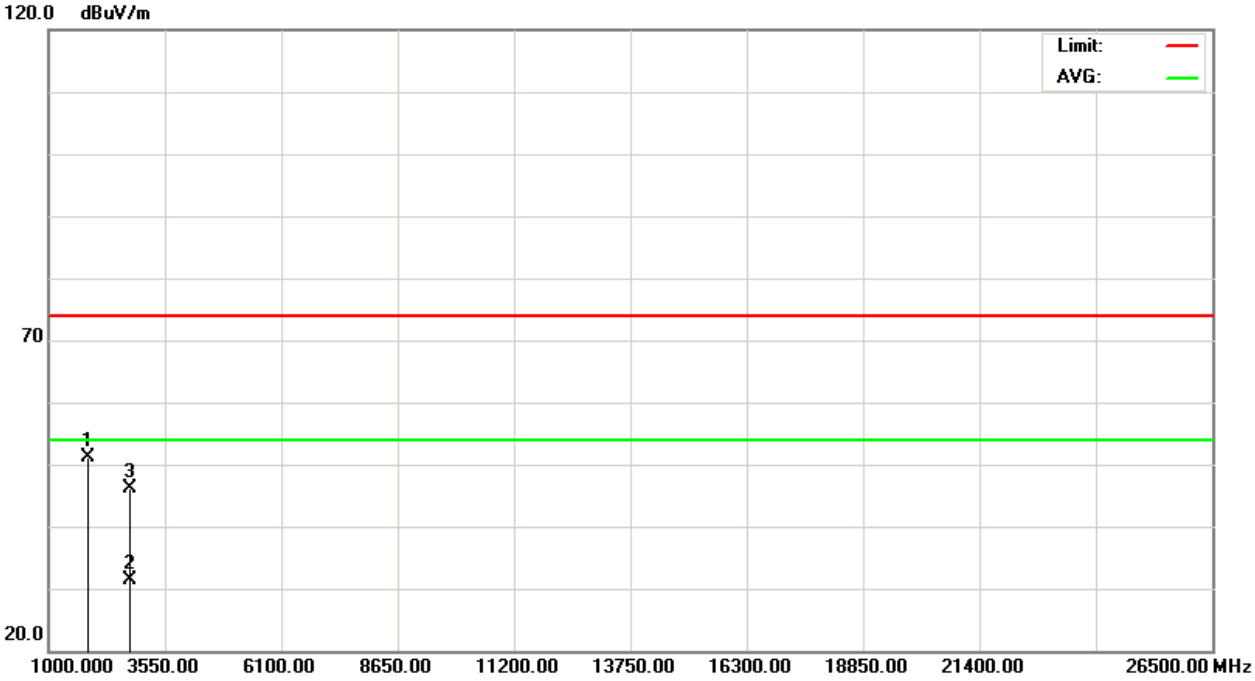
(8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis：X

TX 912MHz_11G 10MHz (Above 1000 MHz, Vertical)



TX 912MHz_11G 10MHz (Above 1000 MHz, Horizontal)



EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity :	51%
Test Voltage :	AC 120V/60Hz		
Test Mode ：	TX 912MHz_11G 20MHz		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
1823.70	V	68.00	*	-5.13	62.87	*	74.00	54.00	X/H
2741.10	V	49.95	37.04	-2.50	47.45	34.54	74.00	54.00	X/H
1823.00	H	54.19	*	-5.13	49.06	*	74.00	54.00	X/H
2740.60	H	45.79	33.37	-2.50	43.29	30.87	74.00	54.00	X/H

Remark：

(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) 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。

(3) 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. (This judgment method includes the Band Edge Requirement.)

(4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

(5) 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.

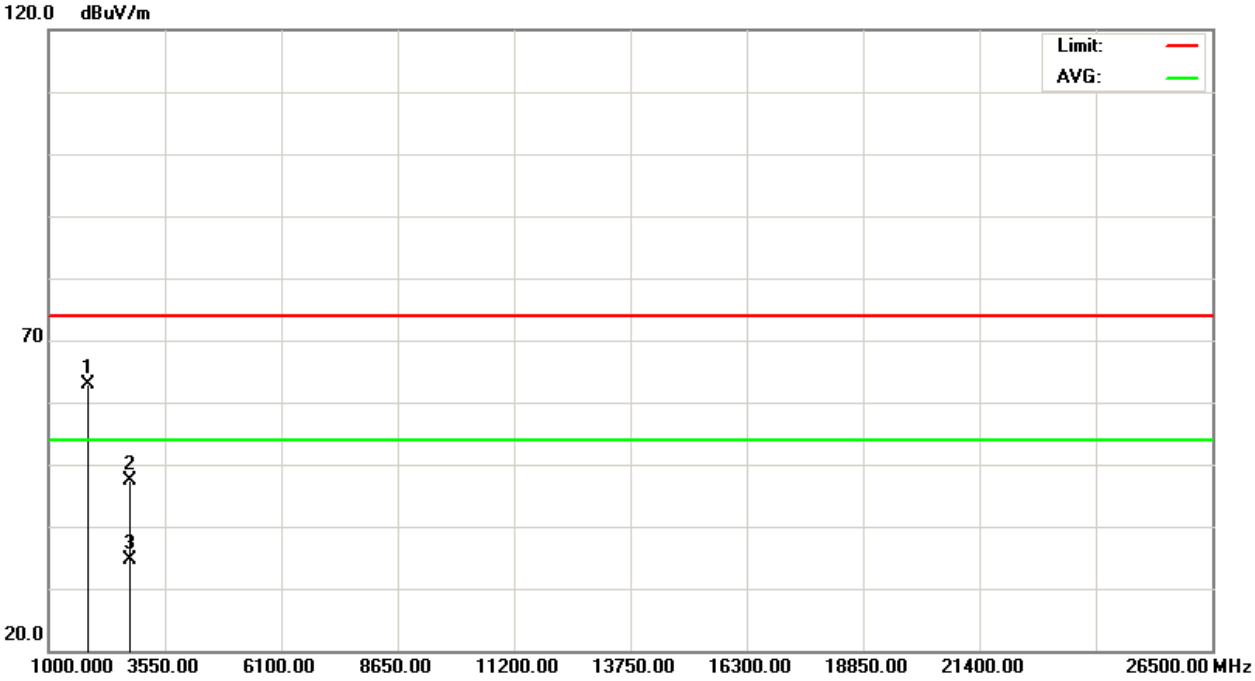
(6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(7) EUT Orthogonal Axes：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

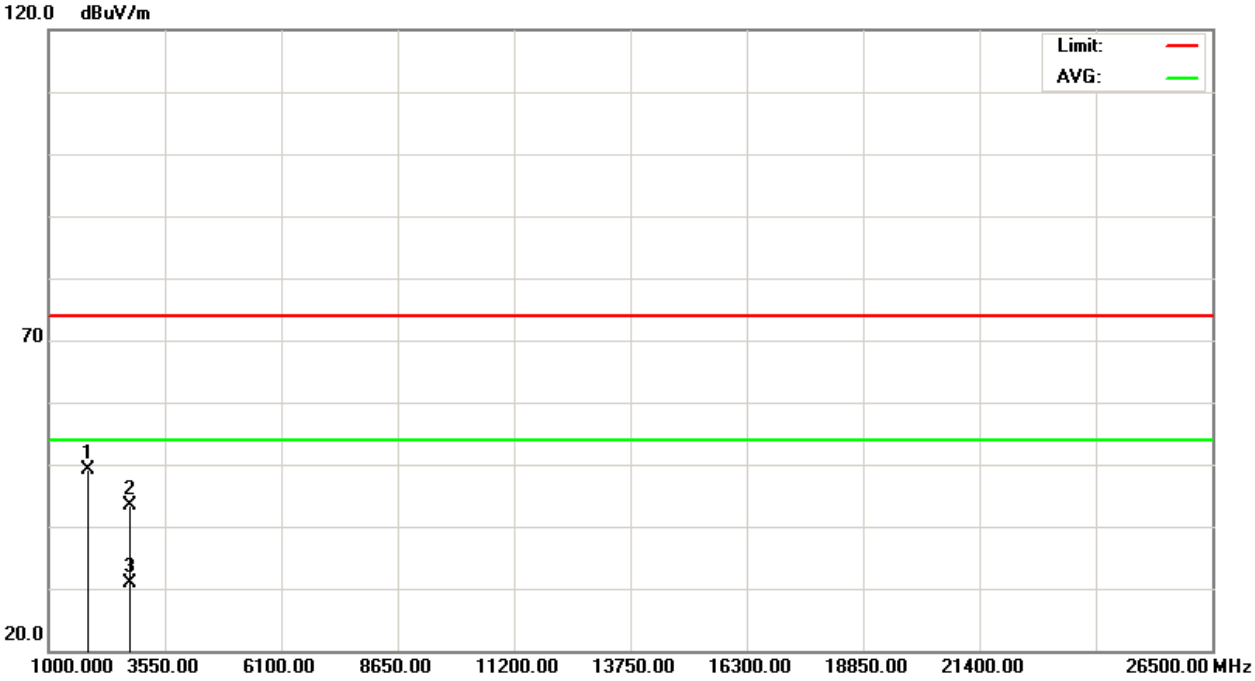
(8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis：X

TX 912MHz_11G 20MHz (Above 1000 MHz, Vertical)



TX 912MHz_11G 20MHz (Above 1000 MHz, Horizontal)



EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity :	51%
Test Voltage :	AC 120V/60Hz		
Test Mode ：	TX 917MHz_11B 20MHz		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
1833.96	V	71.64	*	-5.11	66.53	*	74.00	54.00	X/H
2751.64	V	60.25	55.00	-2.51	57.74	52.49	74.00	54.00	X/H
1833.96	H	58.47	*	-5.11	53.36	*	74.00	54.00	X/H
2751.68	H	56.91	51.36	-2.51	54.40	48.85	74.00	54.00	X/H

Remark：

(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) 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。

(3) 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. (This judgment method includes the Band Edge Requirement.)

(4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

(5) 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.

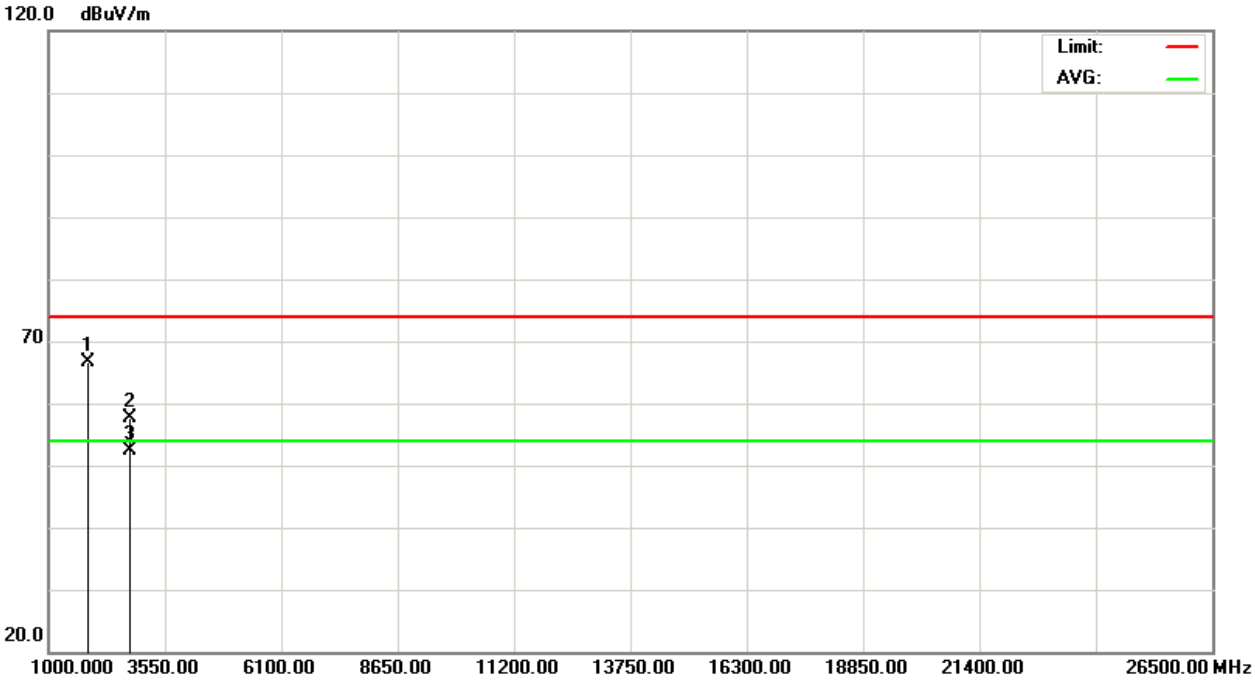
(6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(7) EUT Orthogonal Axes：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

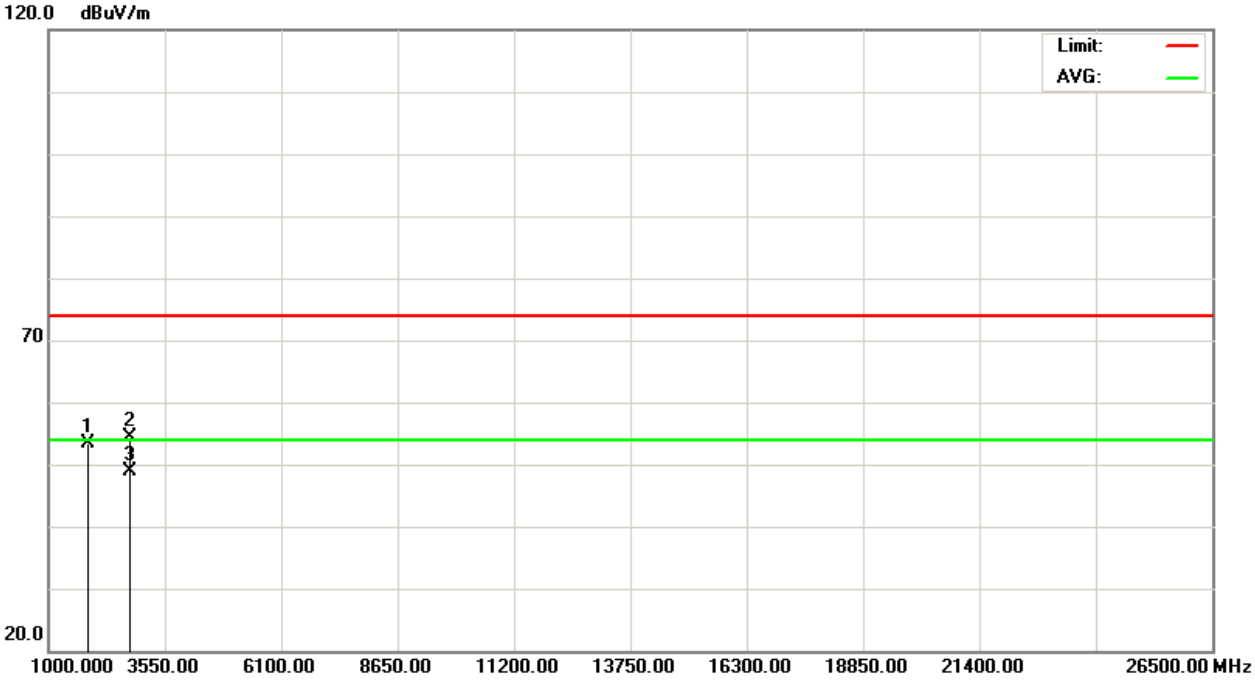
(8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis：X

TX 917MHz_11B 20MHz (Above 1000 MHz, Vertical)



TX 917MHz_11B 20MHz (Above 1000 MHz, Horizontal)



EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity :	51%
Test Voltage :	AC 120V/60Hz		
Test Mode ：	TX 917MHz_11G 5MHz		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
1834.32	V	73.92	*	-5.10	68.82	*	74.00	54.00	X/H
2751.52	V	57.24	38.45	-2.51	54.73	35.94	74.00	54.00	X/H
1834.24	H	57.67	*	-5.10	52.57	*	74.00	54.00	X/H
2751.68	H	49.04	33.13	-2.51	46.53	30.62	74.00	54.00	X/H

Remark：

(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) 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。

(3) 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. (This judgment method includes the Band Edge Requirement.)

(4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

(5) 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.

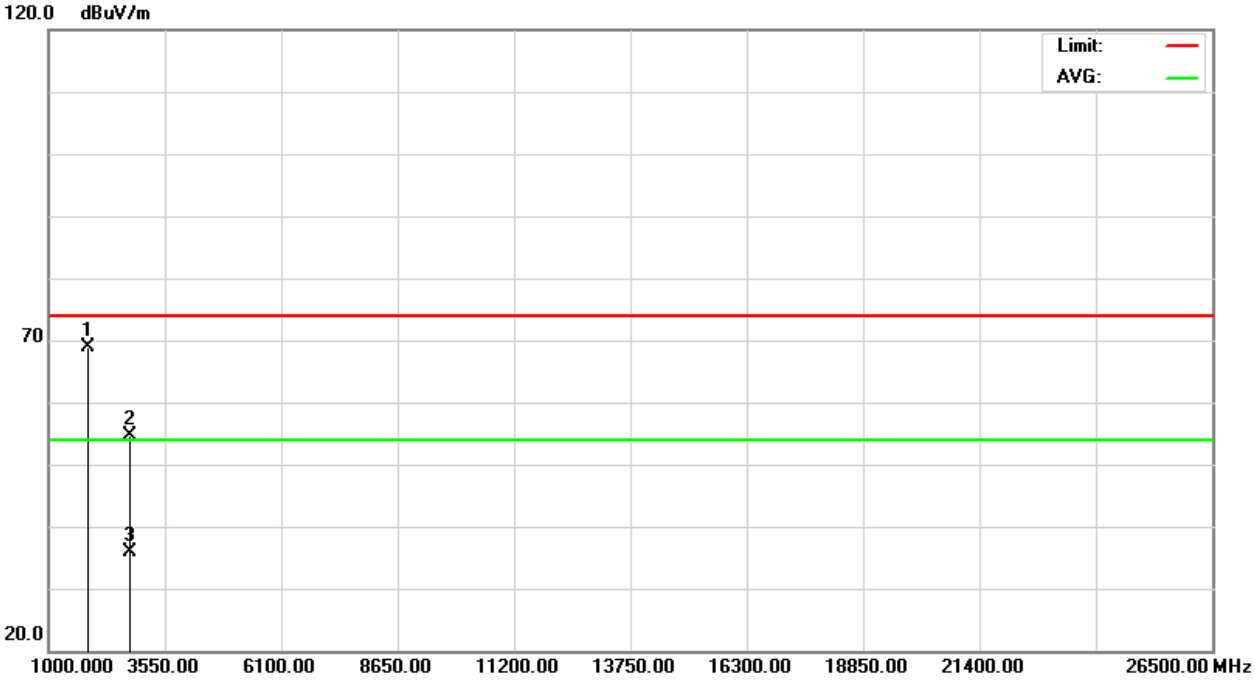
(6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(7) EUT Orthogonal Axes：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

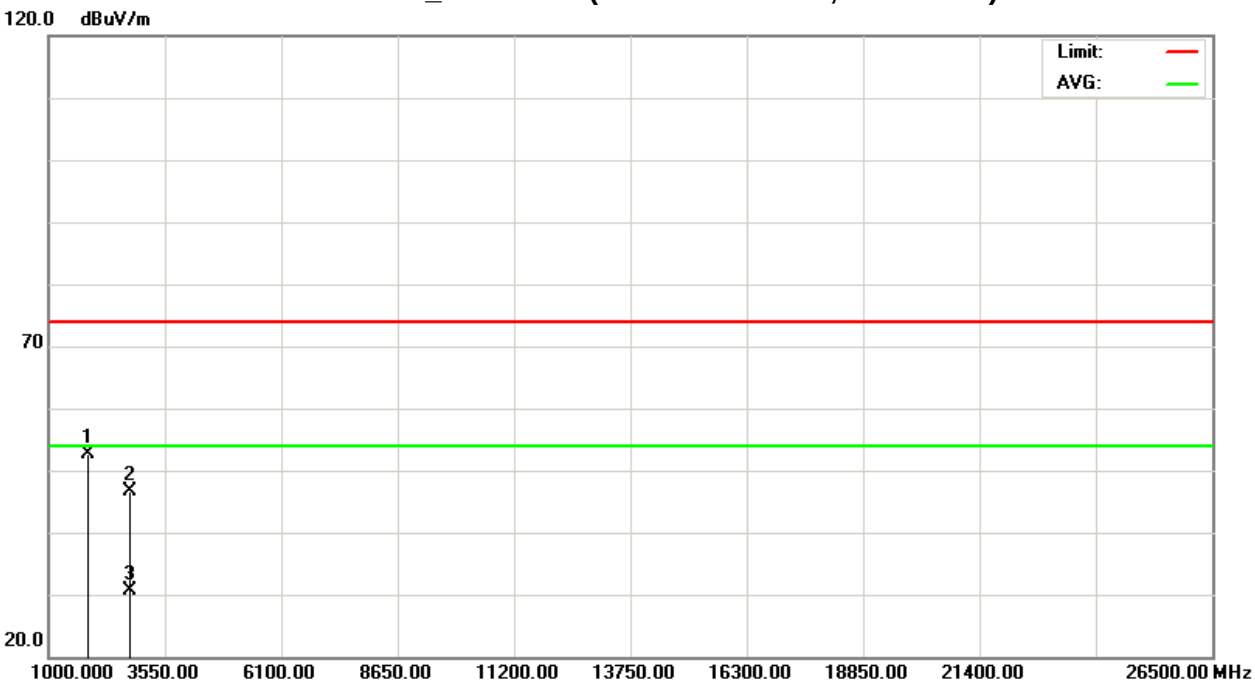
(8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis：X

TX 917MHz_11G 5MHz (Above 1000 MHz, Vertical)



TX 917MHz_11G 5MHz (Above 1000 MHz, Horizontal)



EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity :	51%
Test Voltage :	AC 120V/60Hz		
Test Mode ：	TX 917MHz_11G 10MHz		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
1835.48	V	71.83	*	-5.10	66.73	*	74.00	54.00	X/H
2752.20	V	54.26	37.18	-2.51	51.75	34.67	74.00	54.00	X/H
1834.32	H	58.03	*	-5.10	52.93	*	74.00	54.00	X/H
2752.04	H	50.55	35.08	-2.51	48.04	32.57	74.00	54.00	X/H

Remark：

(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) 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。

(3) 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. (This judgment method includes the Band Edge Requirement.)

(4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

(5) 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.

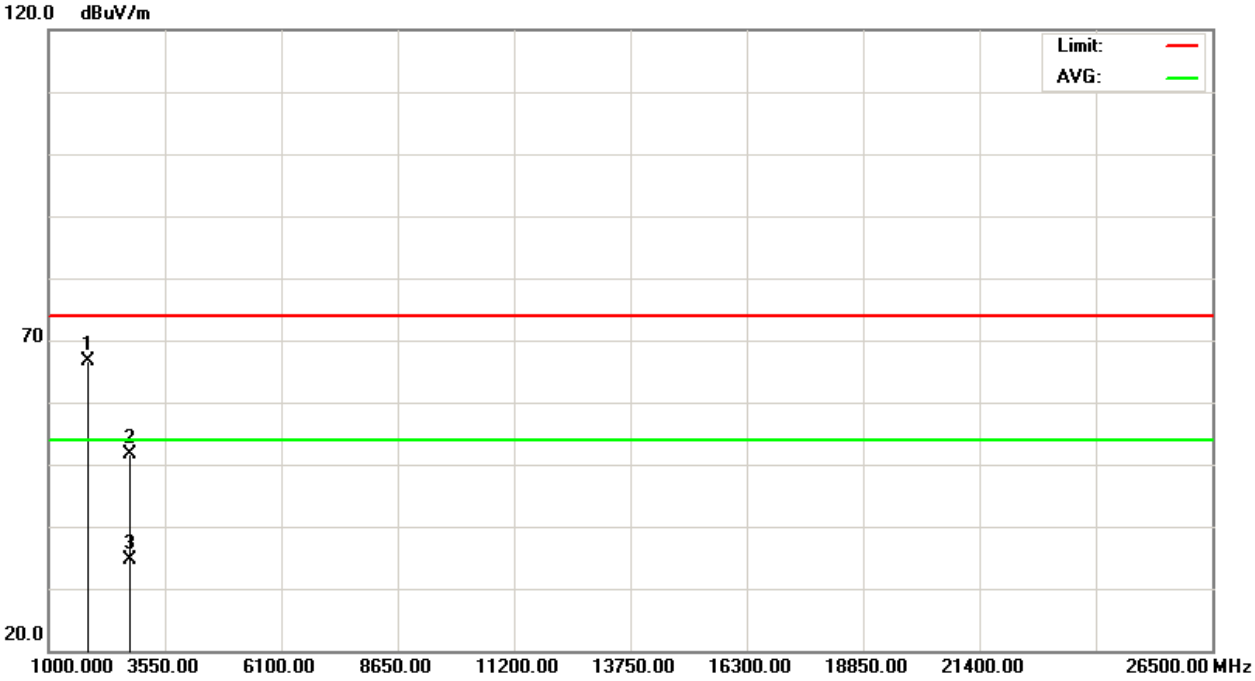
(6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(7) EUT Orthogonal Axes：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

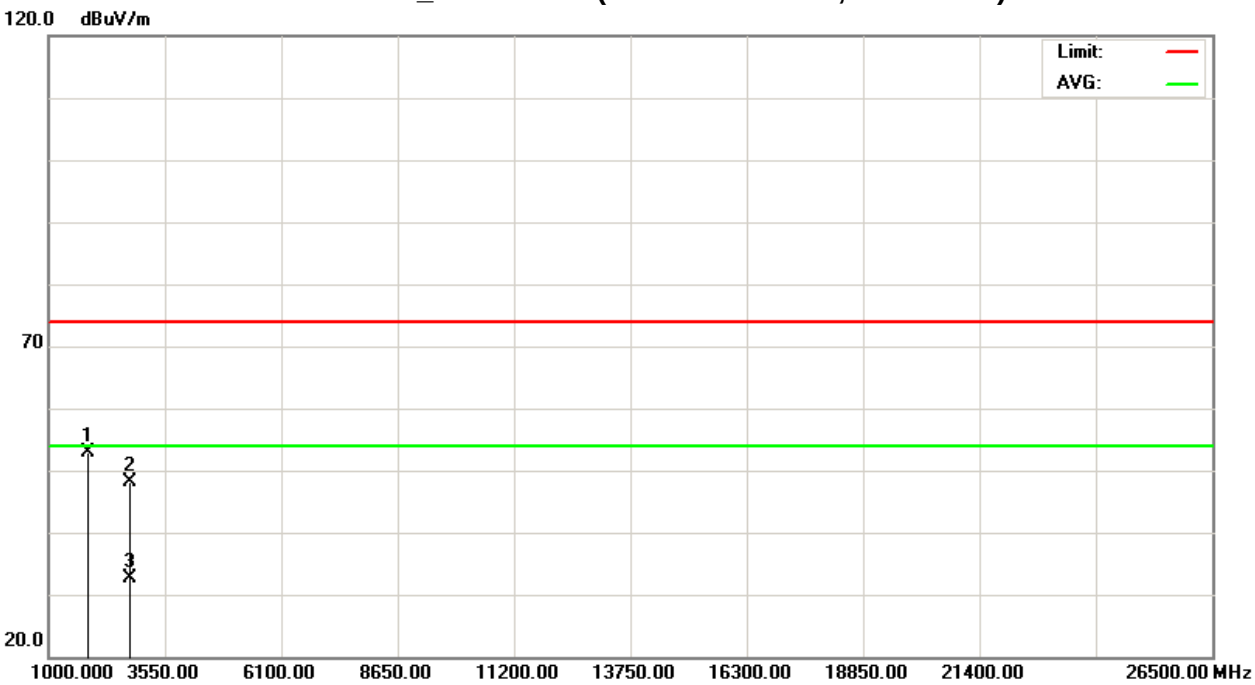
(8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis：X

TX 917MHz_11G 10MHz (Above 1000 MHz, Vertical)



TX 917MHz_11G 10MHz (Above 1000 MHz, Horizontal)



EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity :	51%
Test Voltage :	AC 120V/60Hz		
Test Mode ：	TX 917MHz_11G 20MHz		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
1835.90	V	66.89	*	-5.10	61.79	*	74.00	54.00	X/H
2751.60	V	48.67	36.60	-2.51	46.16	34.09	74.00	54.00	X/H
1837.10	H	54.40	*	-5.10	49.30	*	74.00	54.00	X/H
2750.20	H	42.82	32.48	-2.51	40.31	29.97	74.00	54.00	X/H

Remark：

(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) 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。

(3) 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. (This judgment method includes the Band Edge Requirement.)

(4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

(5) 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.

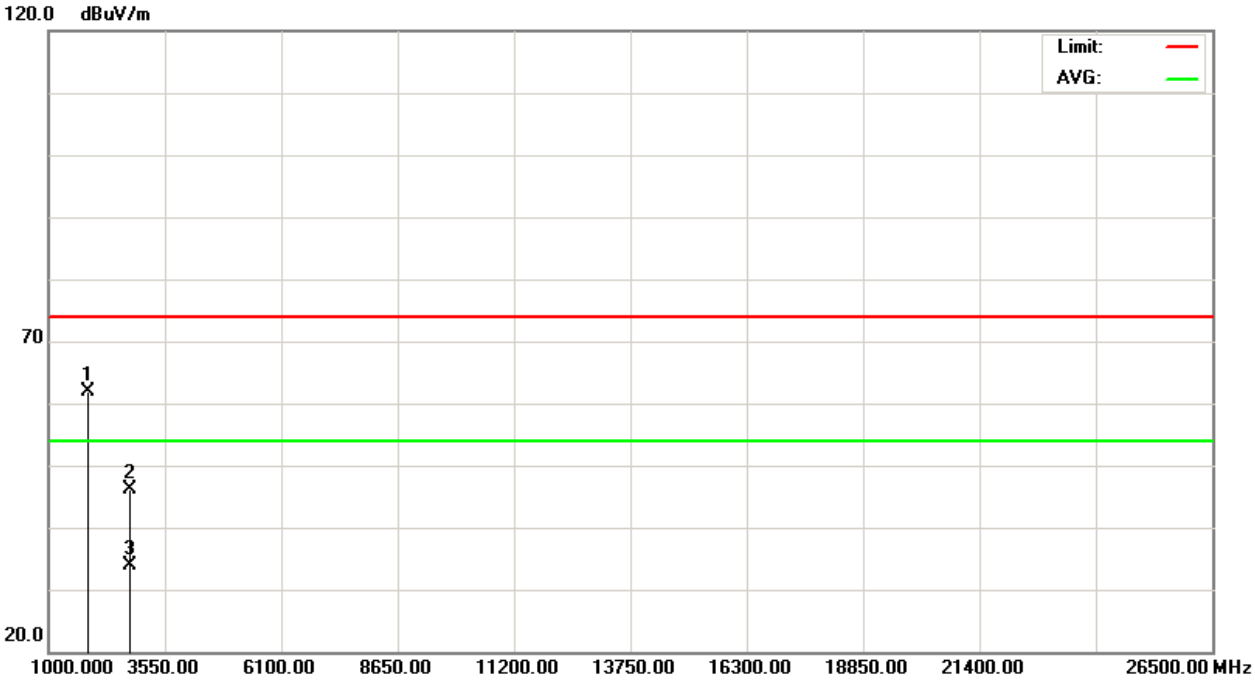
(6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(7) EUT Orthogonal Axes：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

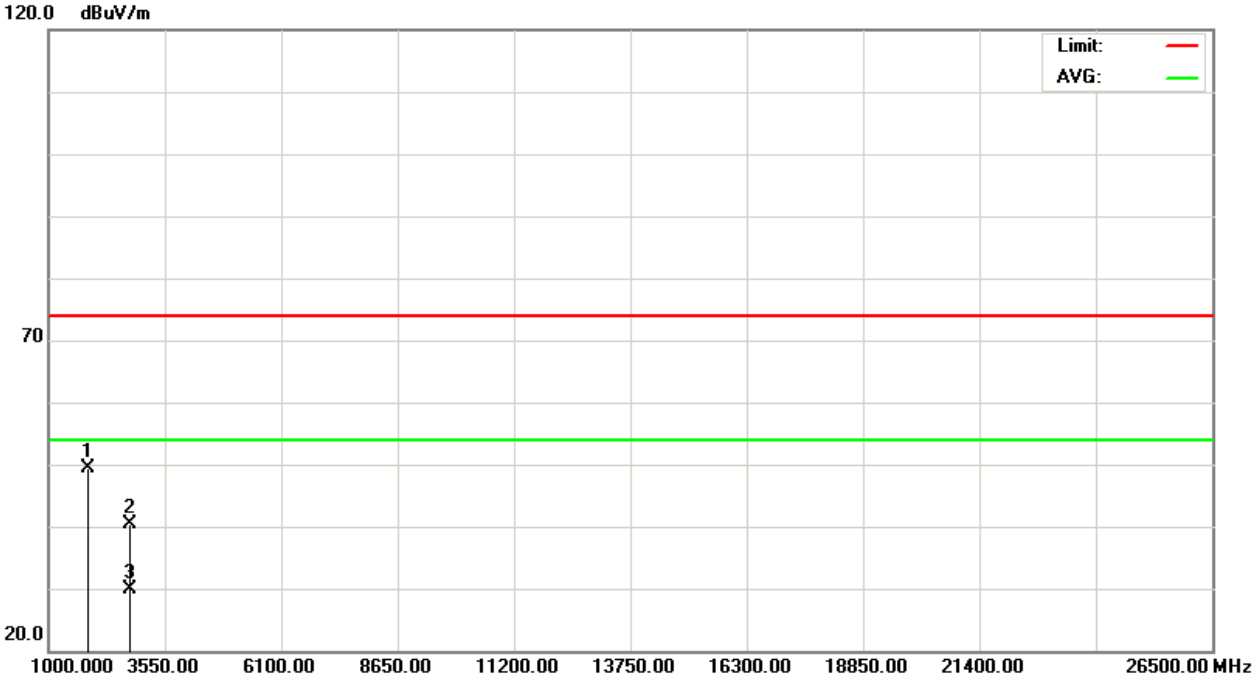
(8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis：X

TX 917MHz_11G 20MHz (Above 1000 MHz, Vertical)



TX 917MHz_11G 20MHz (Above 1000 MHz, Horizontal)



EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity :	51%
Test Voltage :	AC 120V/60Hz		
Test Mode ：	TX 922MHz_11G 5MHz		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
1843.44	V	75.31	*	-5.08	70.23	*	74.00	54.00	X/H
2764.68	V	56.88	34.32	-2.53	54.35	31.79	74.00	54.00	X/H
1843.52	H	58.56	*	-5.08	53.48	*	74.00	54.00	X/H
2764.52	H	47.92	32.52	-2.23	45.69	30.29	74.00	54.00	X/H

Remark：

(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) 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。

(3) 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. (This judgment method includes the Band Edge Requirement.)

(4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

(5) 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.

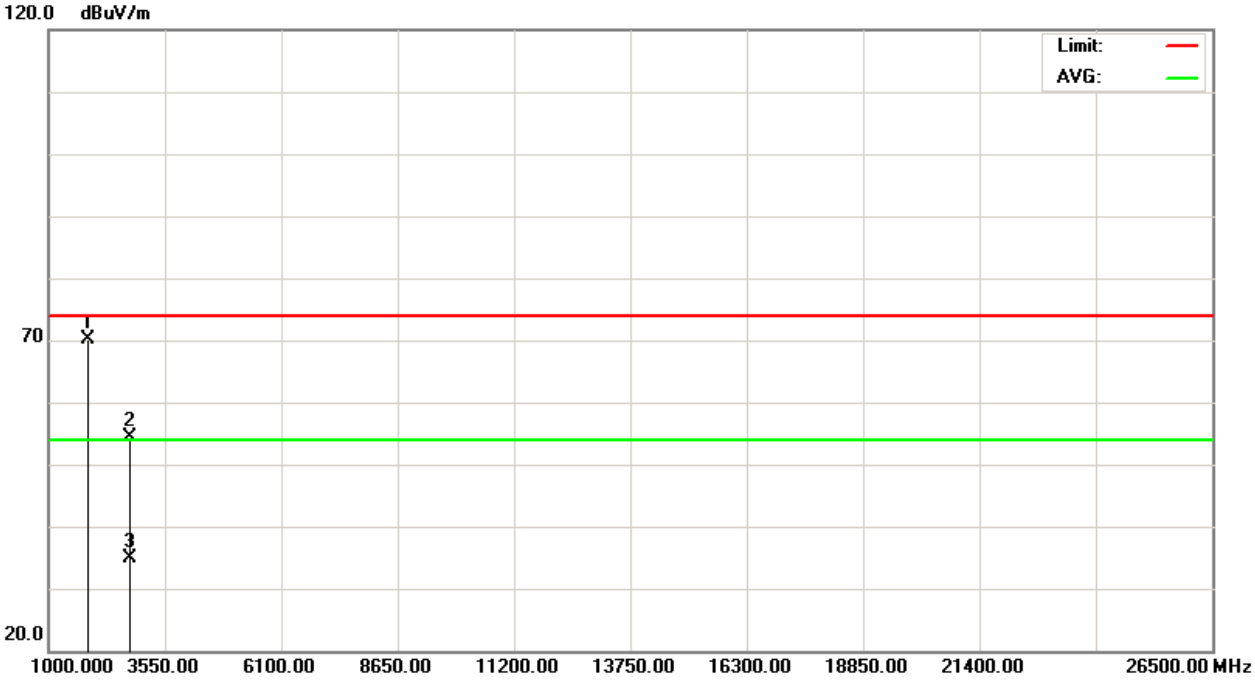
(6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(7) EUT Orthogonal Axes：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

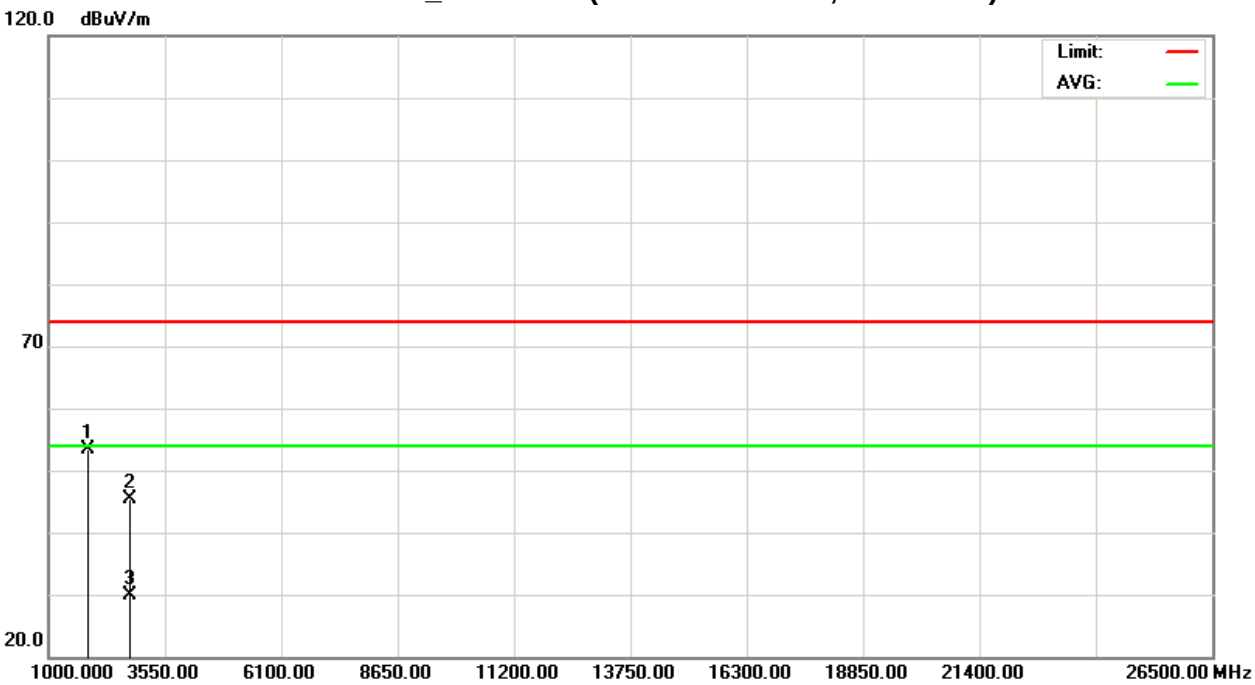
(8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis：X

TX 922MHz_11G 5MHz (Above 1000 MHz, Vertical)



TX 922MHz_11G 5MHz (Above 1000 MHz, Horizontal)



EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity :	51%
Test Voltage :	AC 120V/60Hz		
Test Mode ：	TX 922MHz_11G 10MHz		

Freq.	Ant.Pol.	Reading		Ant./CF	Act.		Limit		Note
		Peak	AV		Peak	AV	Peak	AV	
(MHz)	H/V	(dBuV)	(dBuV)	CF(dB)	(dBuV/m)	(dBuV/m)	(dBuV/m)	(dBuV/m)	
1839.36	V	75.23	*	-5.09	70.14	*	74.00	54.00	X/H
2761.44	V	52.21	35.15	-2.52	49.69	32.63	74.00	54.00	X/H
1837.00	H	56.18	*	-5.10	51.08	*	74.00	54.00	X/H
2756.88	H	50.03	32.71	-2.22	47.81	30.49	74.00	54.00	X/H

Remark：

(1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = Auto

(2) 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。

(3) 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. (This judgment method includes the Band Edge Requirement.)

(4) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission 。

(5) 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.

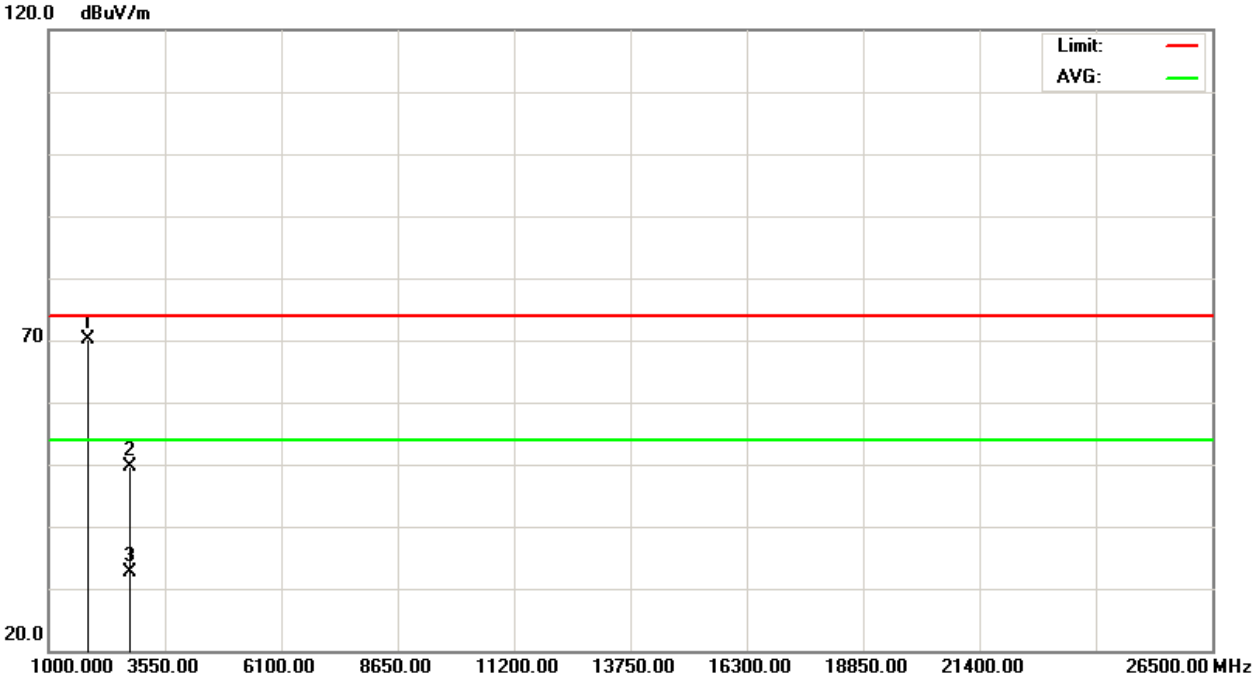
(6) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

(7) EUT Orthogonal Axes：
"X" - denotes Laid on Table；"Y" - denotes Vertical Stand；"Z" - denotes Side Stand

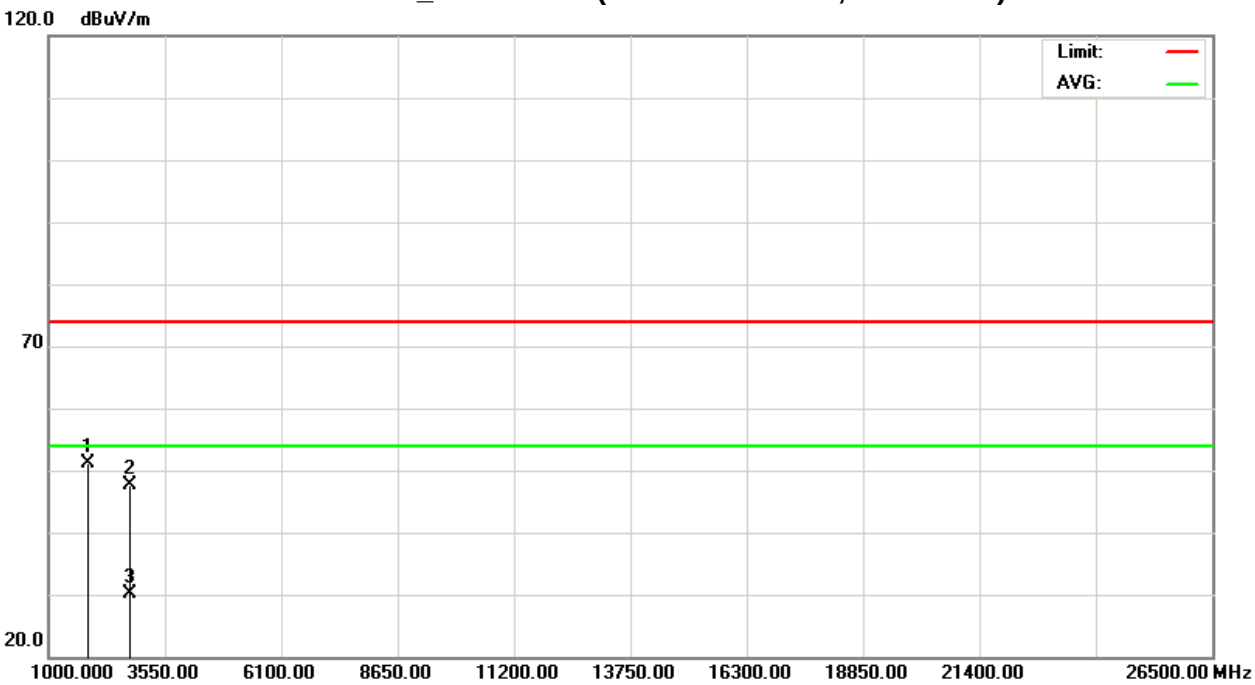
(8) During the measurements above 1GHz it is taken care of that the EUT is always within the 3dB cone of radiation BW of the used antenna.

Orthogonal Axis：X

TX 922MHz_11G 10MHz (Above 1000 MHz, Vertical)



TX 922MHz_11G 10MHz (Above 1000 MHz, Horizontal)



5. BANDWITH TEST

5.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart C			
Test Item	Limit	Frequency Range (MHz)	Result
Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

5.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Aug. 31, 2011

Remark: ” N/A” denotes No Model Name , Serial No. or No Calibration specified.

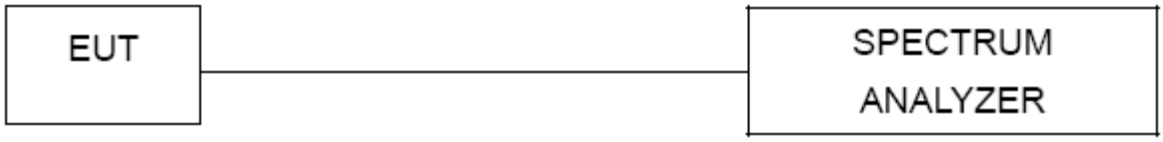
5.1.2 TEST PROCEDURE

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.

5.1.3 DEVIATION FROM STANDARD

No deviation.

5.1.4 TEST SETUP



5.1.5 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.
Chip antenna measurement result.

5.1.6 TEST RESULTS

EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity：	51%
Test Voltage：	AC 120V/60Hz		
Test Mode ：	TX 907MHz/912MHz/917MHz/922MHz		

Configuration (11B 20MHz)				
Frequency (MHz)	Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	LIMIT (MHz)	Test Result
912MHz	12.08	16.04	>=500KHz	Compliant
917MHz	9.00	14.40	>=500KHz	Compliant

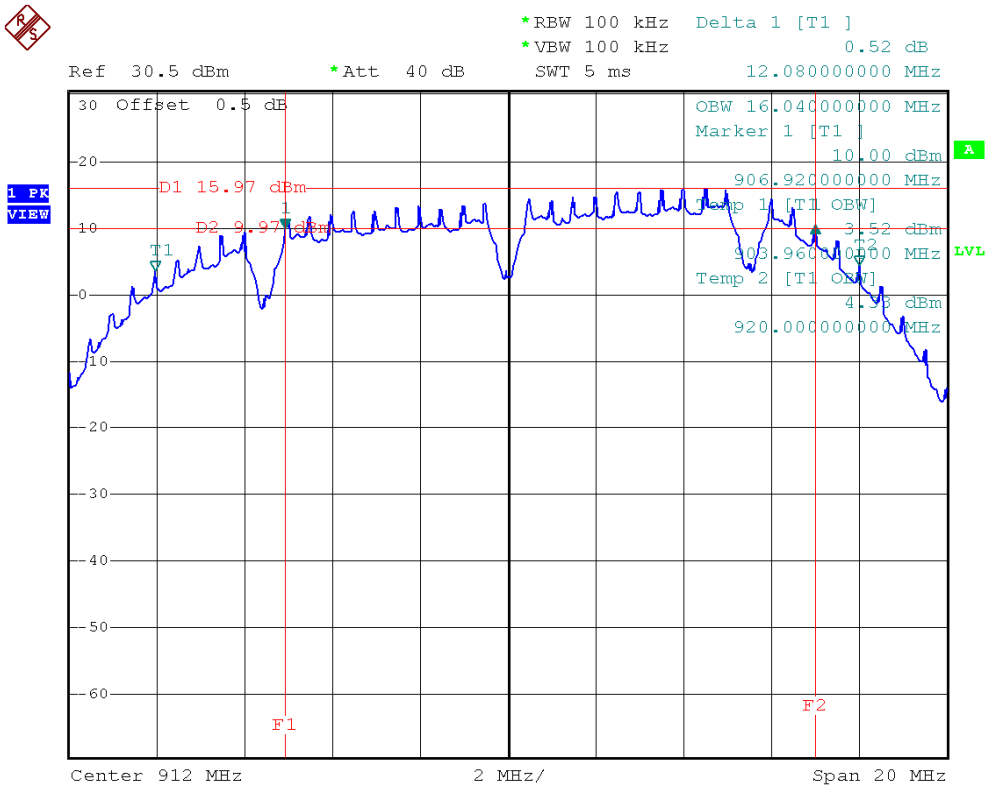
Configuration (11G 5MHz)				
Frequency (MHz)	Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	LIMIT (MHz)	Test Result
907MHz	4.08	4.24	>=500KHz	Compliant
912MHz	4.16	4.24	>=500KHz	Compliant
917MHz	4.12	4.20	>=500KHz	Compliant
922MHz	4.12	4.24	>=500KHz	Compliant

Configuration (11G 10MHz)				
Frequency (MHz)	Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	LIMIT (MHz)	Test Result
907MHz	8.16	8.32	>=500KHz	Compliant
912MHz	8.24	8.40	>=500KHz	Compliant
917MHz	8.08	8.20	>=500KHz	Compliant
922MHz	5.40	8.24	>=500KHz	Compliant

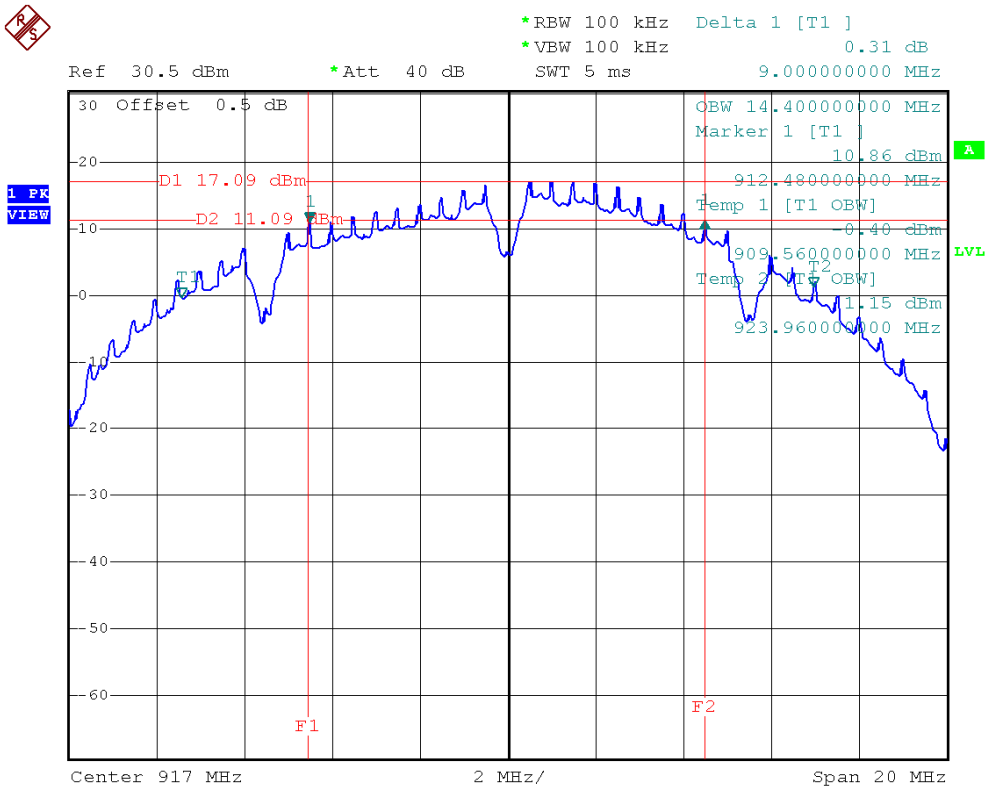
Configuration (11G 20MHz)				
Frequency (MHz)	Bandwidth (MHz)	99% Occupied Bandwidth (MHz)	LIMIT (MHz)	Test Result
912MHz	16.40	16.60	>=500KHz	Compliant
917MHz	12.56	16.24	>=500KHz	Compliant

Configuration (11B 20MHz)

912MHz

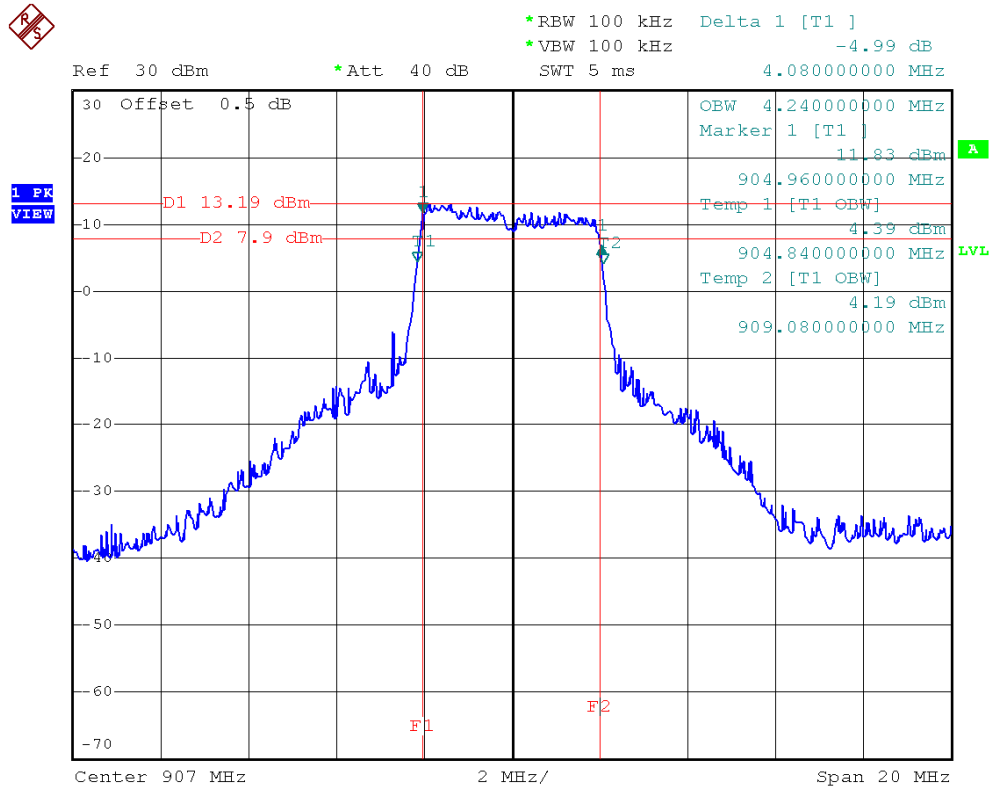


917MHz

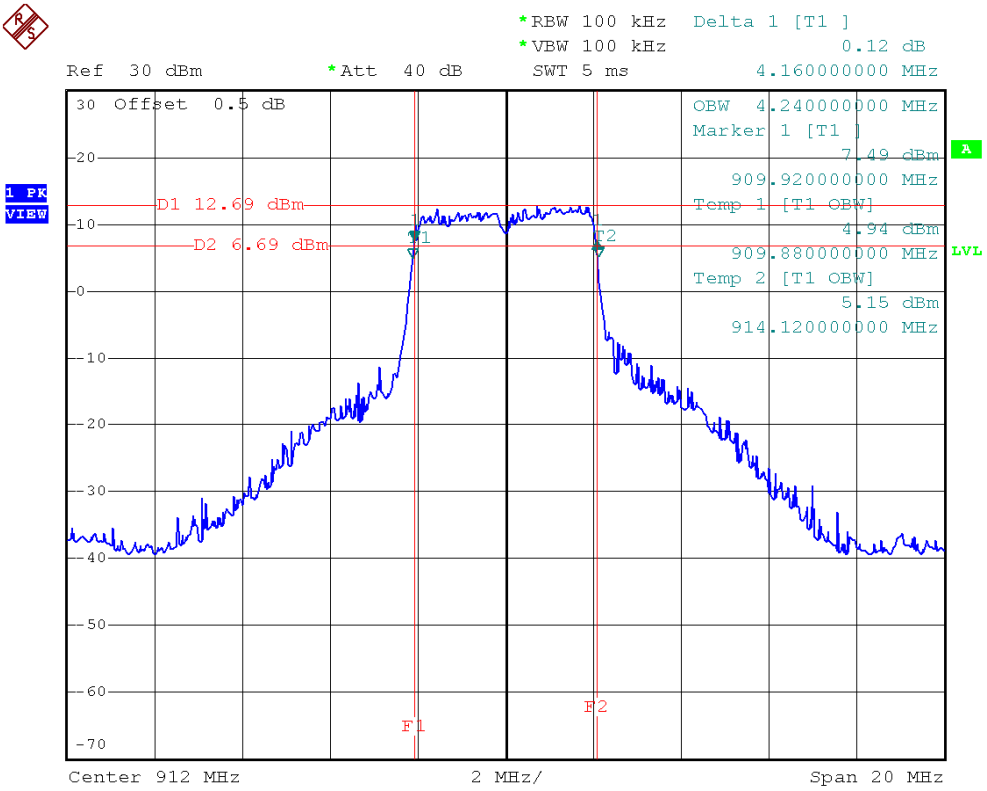


Configuration (11G 5MHz)

907MHz

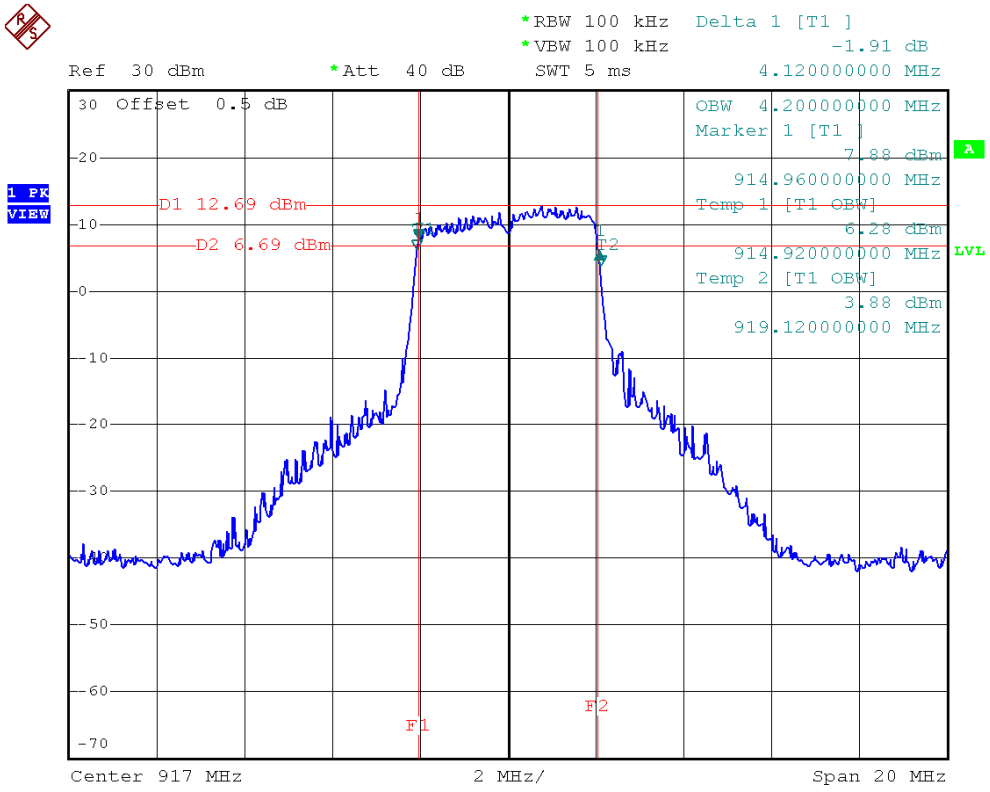


912MHz

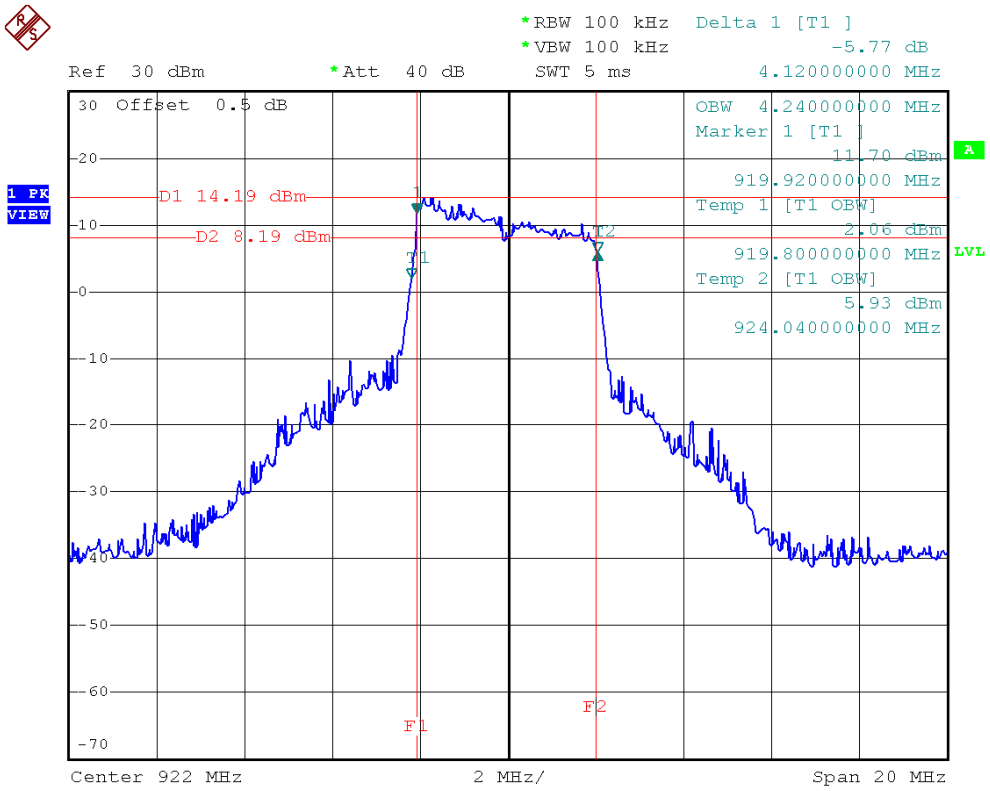


Configuration (11G 5MHz)

917MHz

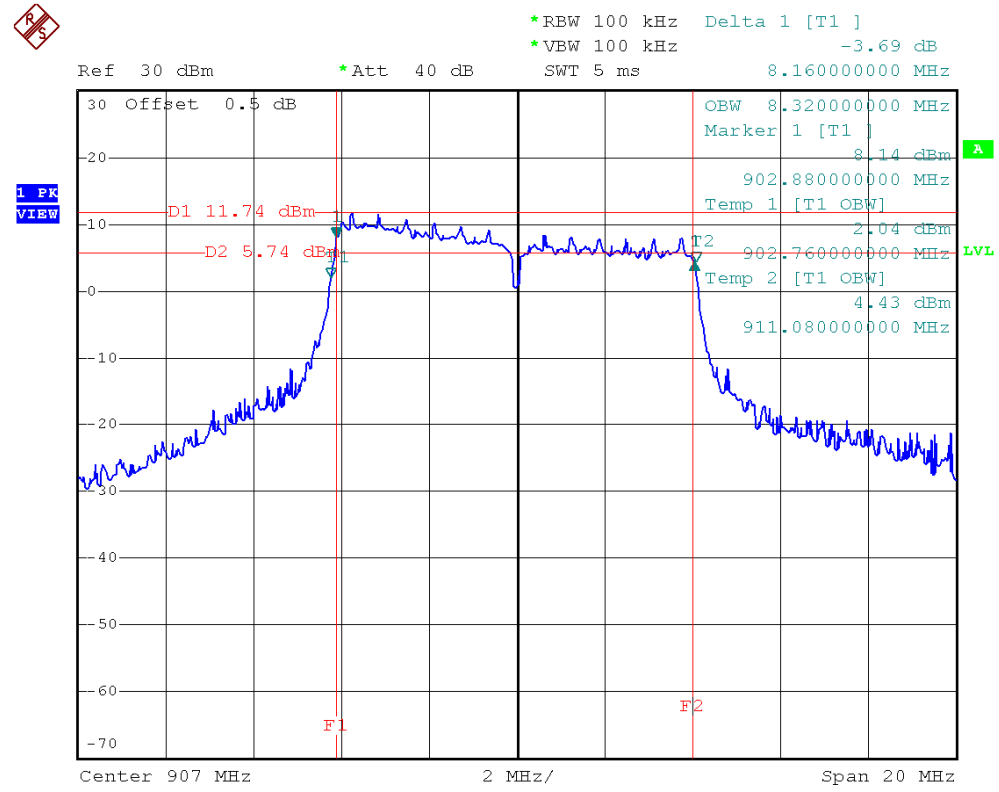


922MHz

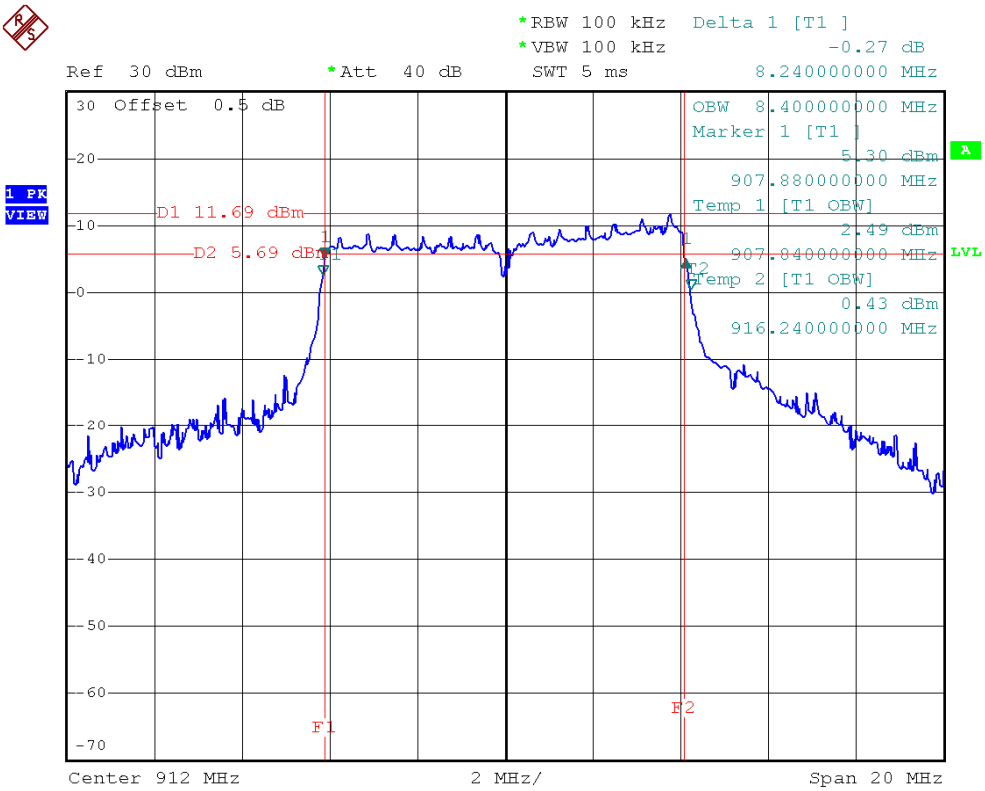


Configuration (11G 10MHz)

907MHz

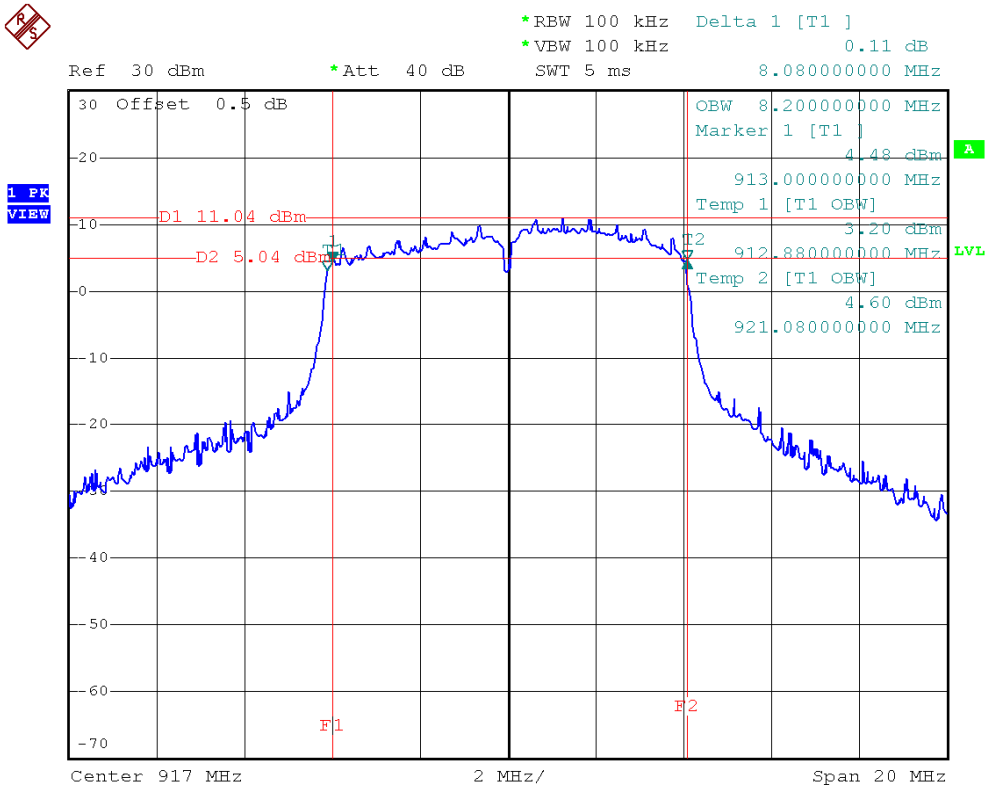


912MHz

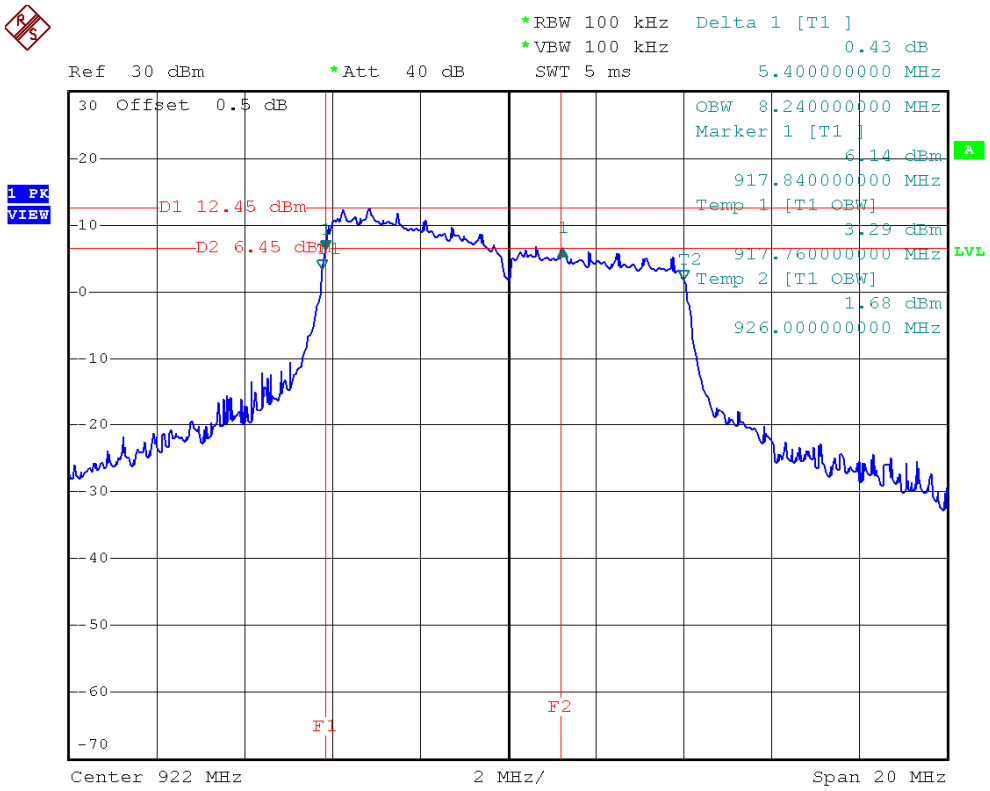


Configuration (11G 10MHz)

917MHz

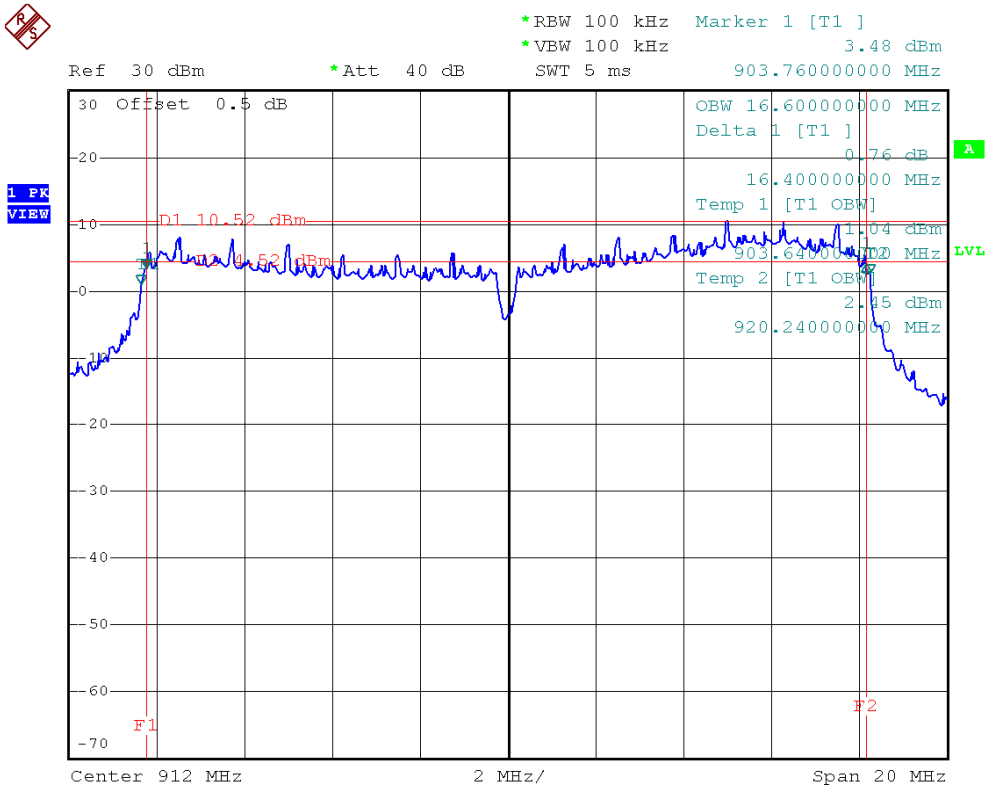


922MHz

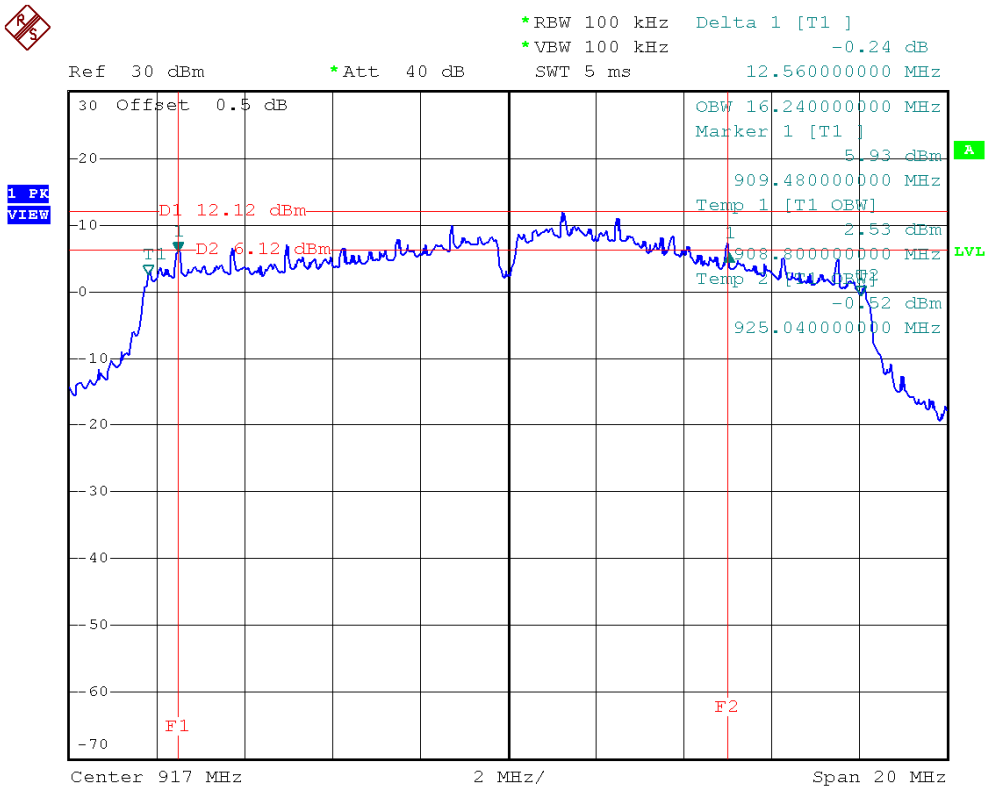


Configuration (11G 20MHz)

912MHz



917MHz



6. PEAK OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart C			
Test Item	Limit	Frequency Range (MHz)	Result
Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

6.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Power Meter	Anritsu	ML2487A	6K00004714	Feb. 10, 2011
2	Power Meter Sensor	Anritsu	MA2491A	34138	Feb. 10, 2011

Remark: ” N/A” denotes No Model Name , Serial No. or No Calibration specified.

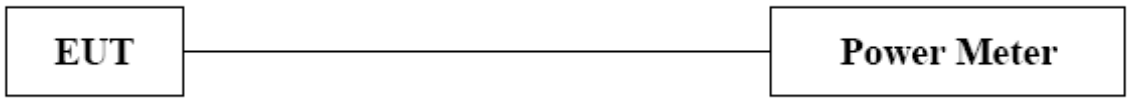
6.1.2 TEST PROCEDURE

a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below,

6.1.3 DEVIATION FROM STANDARD

No deviation.

6.1.4 TEST SETUP



6.1.5 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.
Chip antenna measurement result.

6.1.6 TEST RESULTS

EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity：	51%
Test Voltage：	AC 120V/60Hz		
Test Mode ：	TX 907MHz/912MHz/917MHz/922MHz		

Configuration (11B 20MHz)				
Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)	Test Result
912MHz	29.14	30	1	Compliant
917MHz	28.26	30	1	Compliant

Configuration (11G 5MHz)				
Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)	Test Result
907MHz	28.92	30	1	Compliant
912MHz	28.89	30	1	Compliant
917MHz	28.75	30	1	Compliant
922MHz	28.90	30	1	Compliant

Configuration (11G 10MHz)				
Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)	Test Result
907MHz	29.70	30	1	Compliant
912MHz	29.20	30	1	Compliant
917MHz	29.01	30	1	Compliant
922MHz	29.60	30	1	Compliant

Configuration (11G 20MHz)				
Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)	LIMIT (W)	Test Result
912MHz	29.31	30	1	Compliant
917MHz	29.35	30	1	Compliant

Remark：

(1) **The test requirement, RF conducted output power shall measure each transmitter chain by using channel power method.**

(2) **Total Antenna Gain=5 dBi (Please refer to the Page 9 of 80.).**

7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart C			
Test Item	Limit	Frequency Range (MHz)	Result
Antenna conducted Spurious Emission	20dB less than the peak value of fundamental frequency	30-25000	PASS

7.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Aug. 31, 2011

Remark: ” N/A” denotes No Model Name , Serial No. or No Calibration specified.

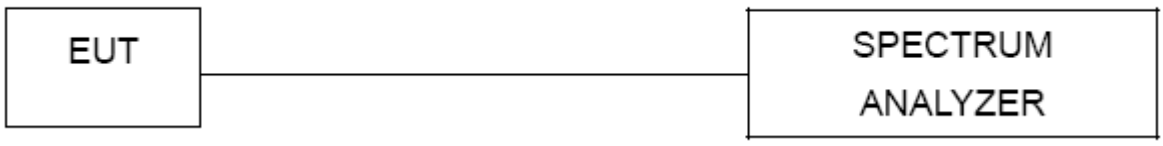
7.1.2 TEST PROCEDURE

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.

7.1.3 DEVIATION FROM STANDARD

No deviation.

7.1.4 TEST SETUP



7.1.5 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.
Chip antenna measurement result.

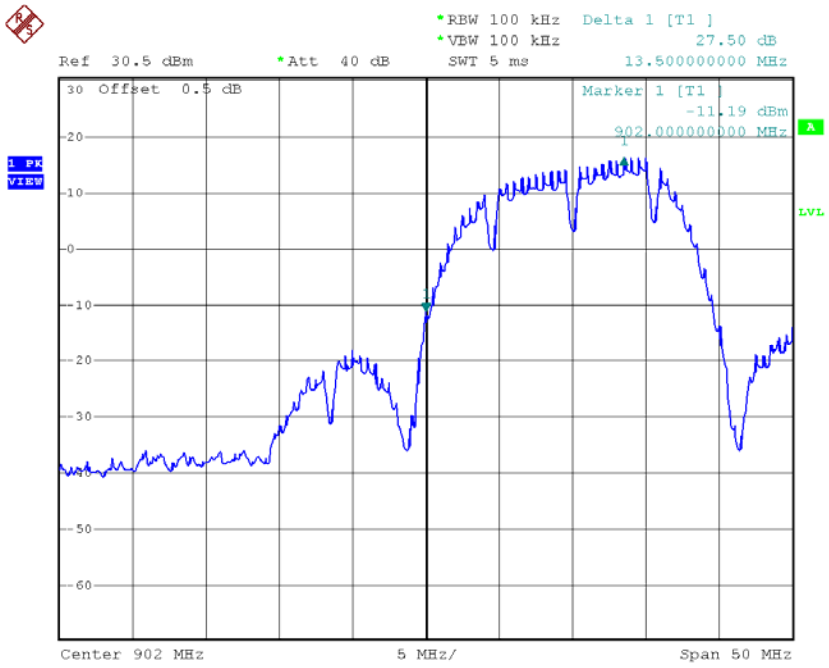
7.1.6 TEST RESULTS

EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity：	51%
Test Voltage：	AC 120V/60Hz		
Test Mode ：	TX 907MHz/912MHz/917MHz/922MHz		

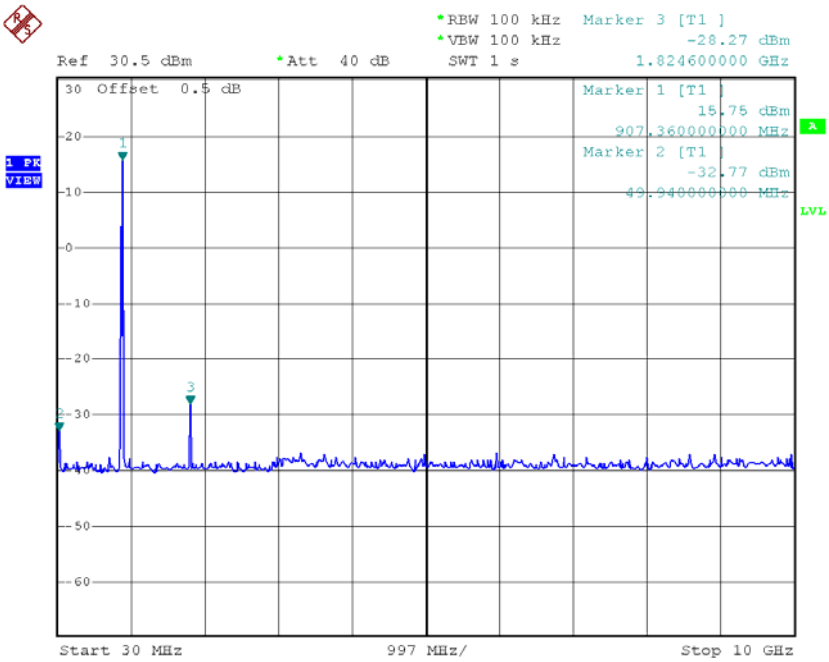
Configuration (11B 20MHz)

912MHz

AVERAGE-LO



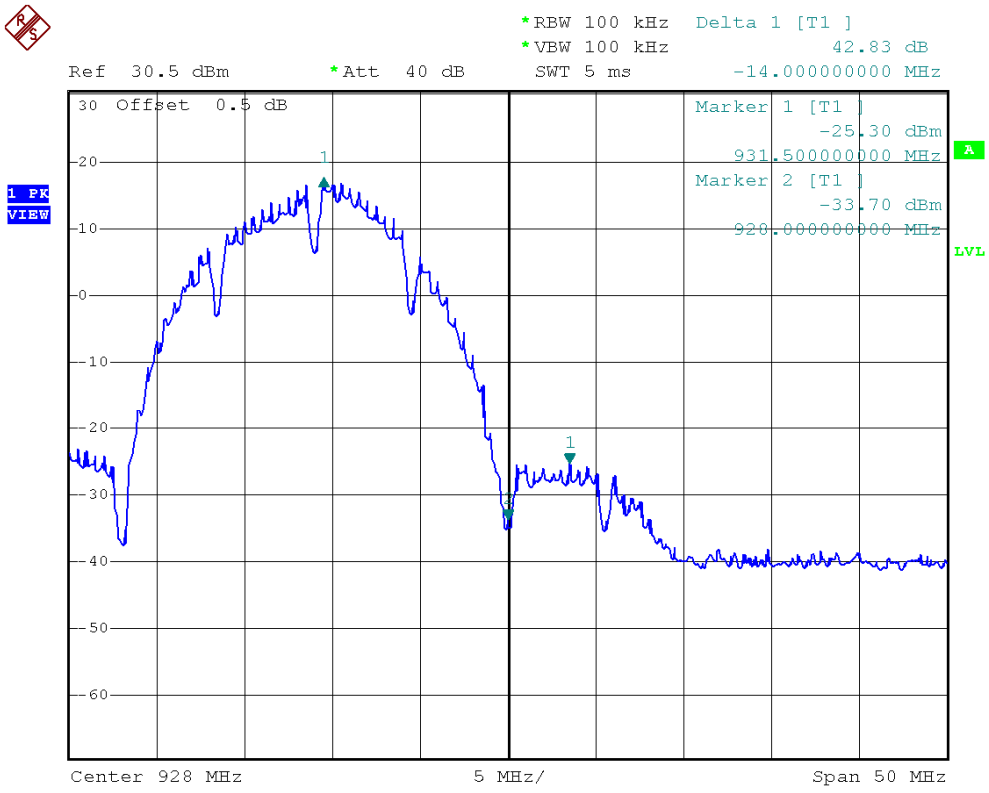
CONDUCTED EMISSION



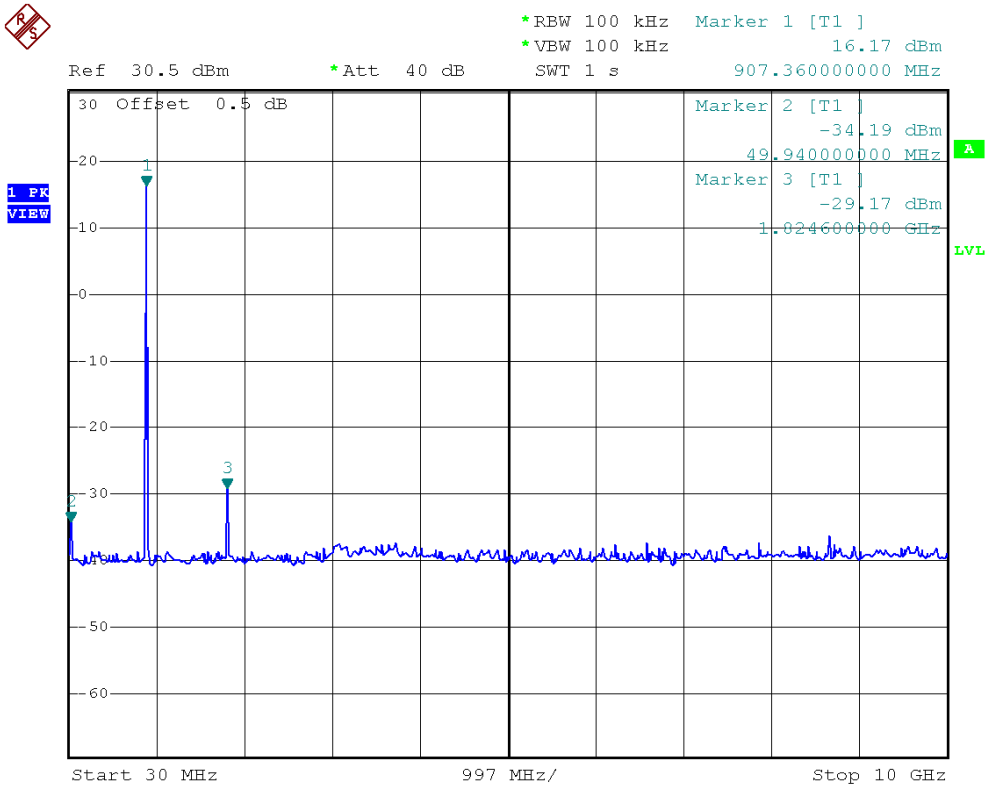
Configuration (11B 20MHz)

917MHz

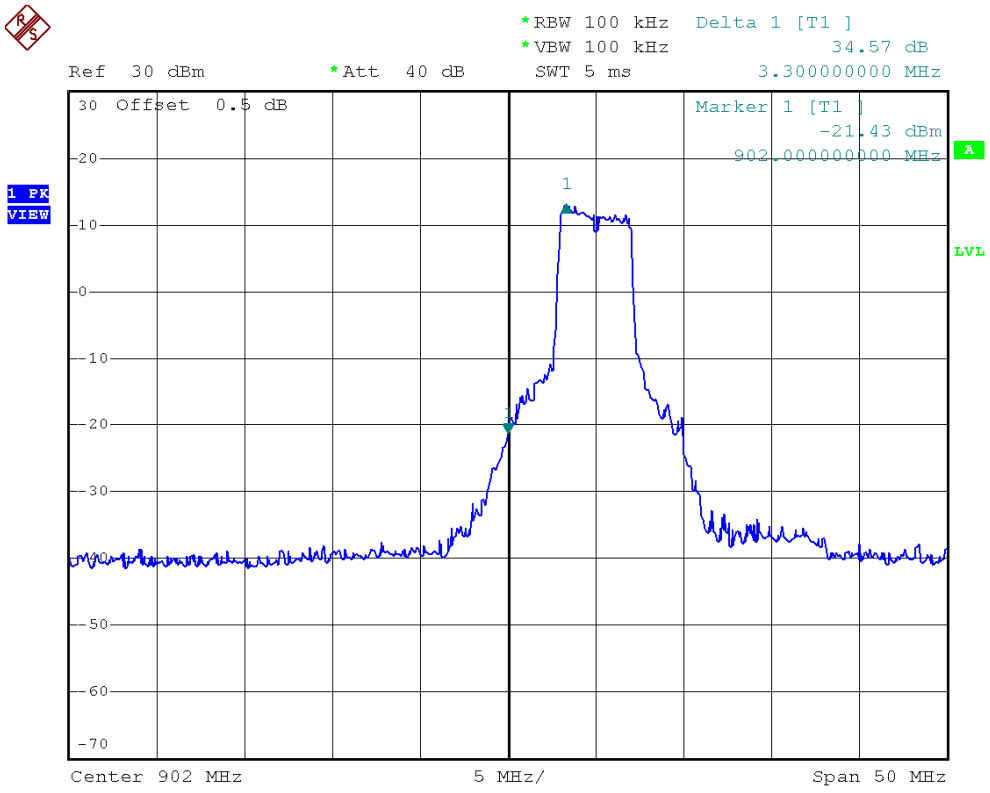
AVERAGE-UP



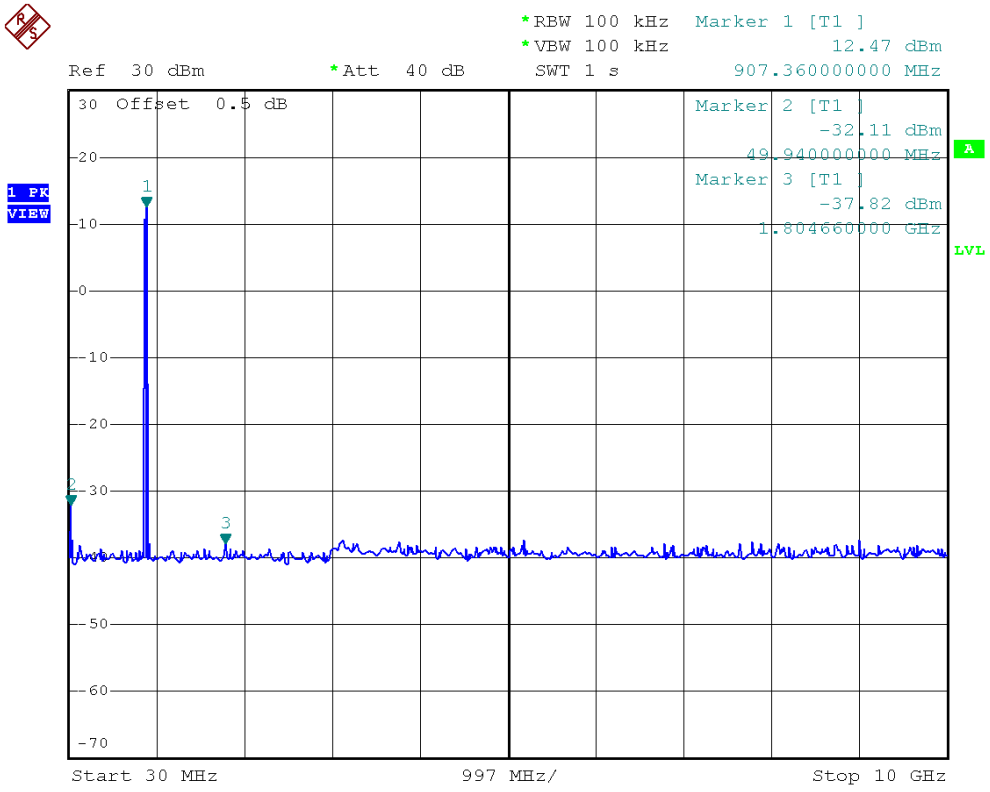
CONDUCTED EMISSION



Configuration (11G 5MHz)
907MHz
AVERAGE-LO



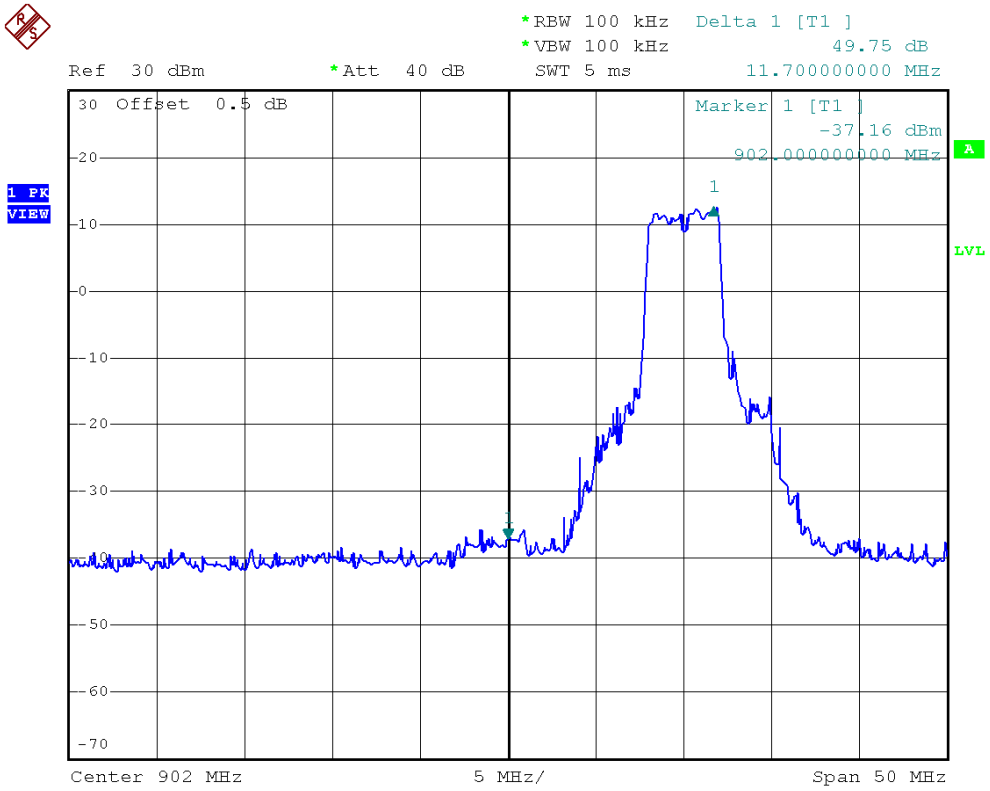
CONDUCTED EMISSION



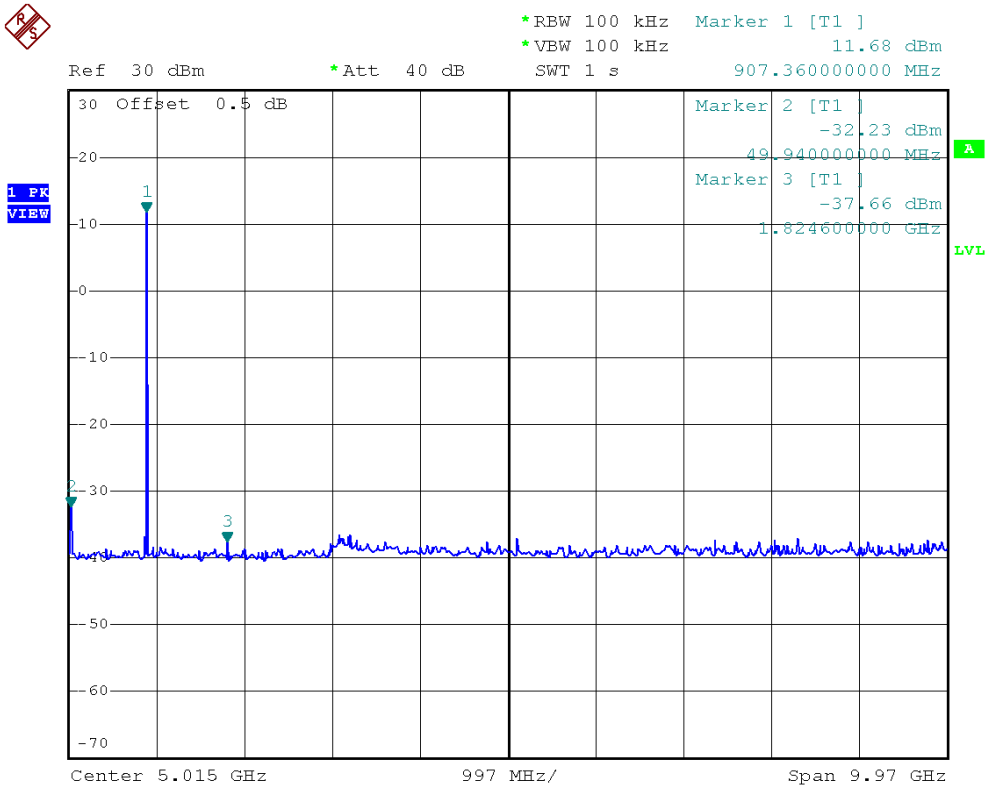
Configuration (11G 5MHz)

912MHz

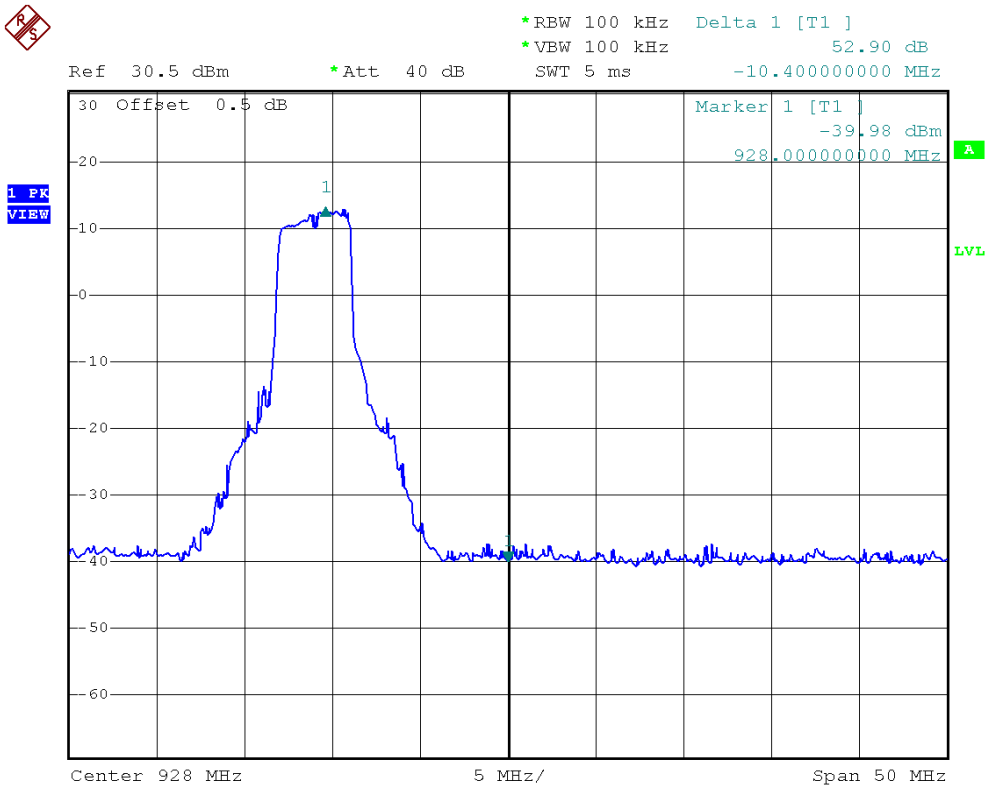
AVERAGE-LO



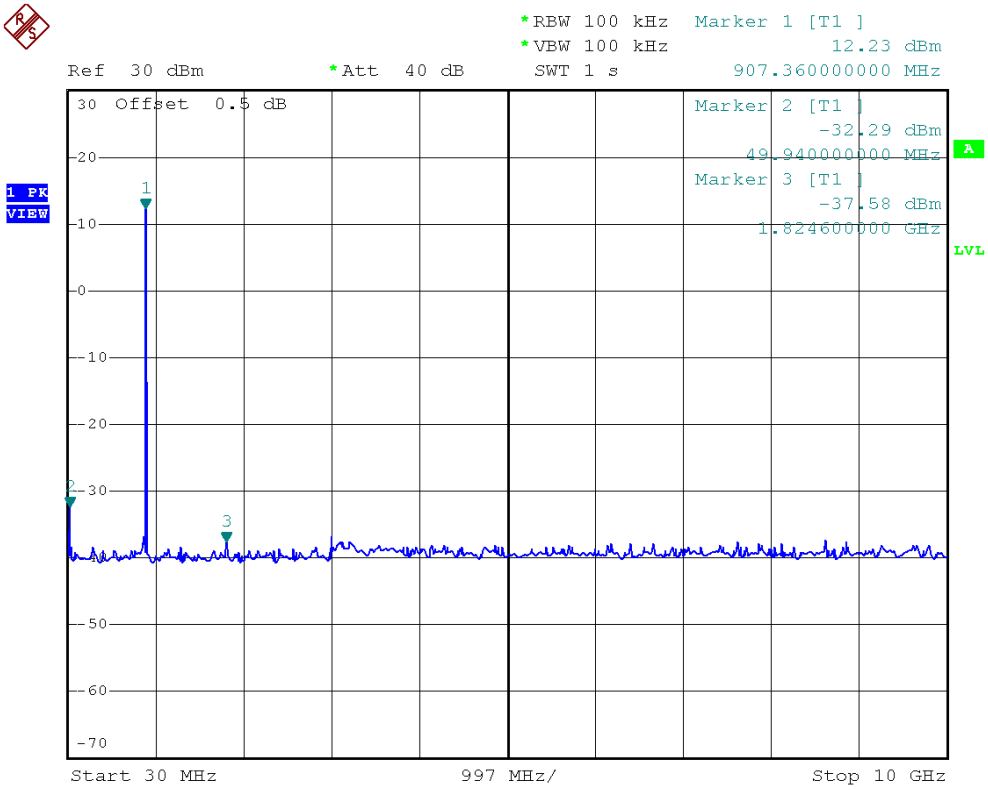
CONDUCTED EMISSION



Configuration (11G 5MHz)
917MHz
AVERAGE-UP



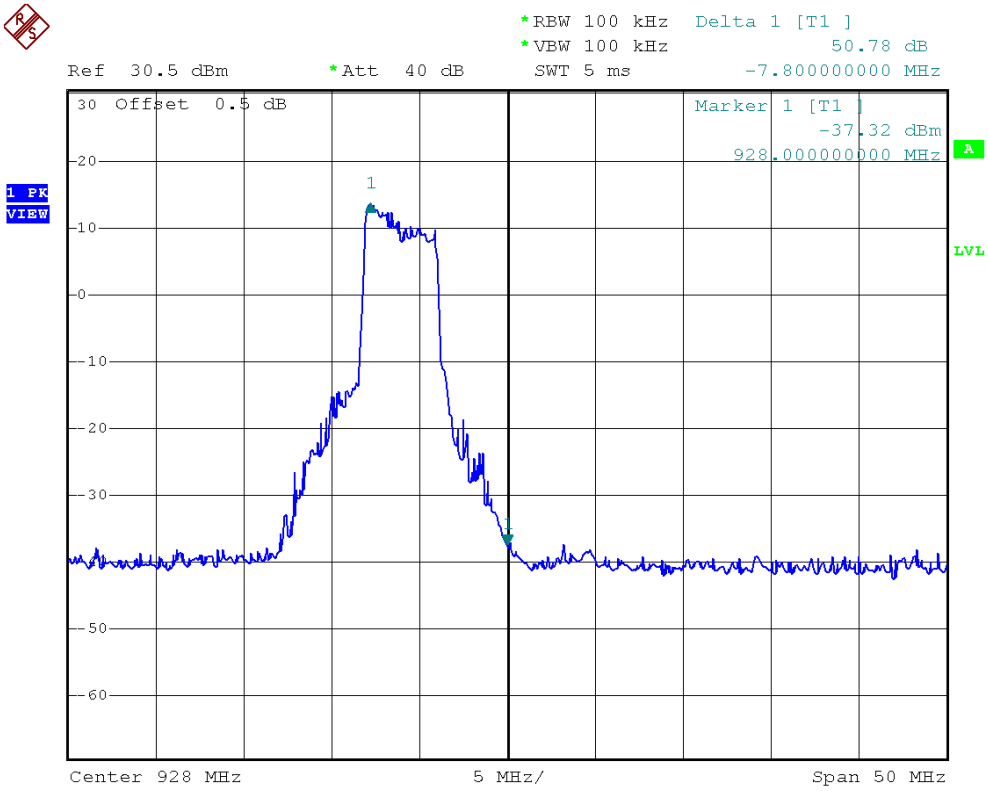
CONDUCTED EMISSION



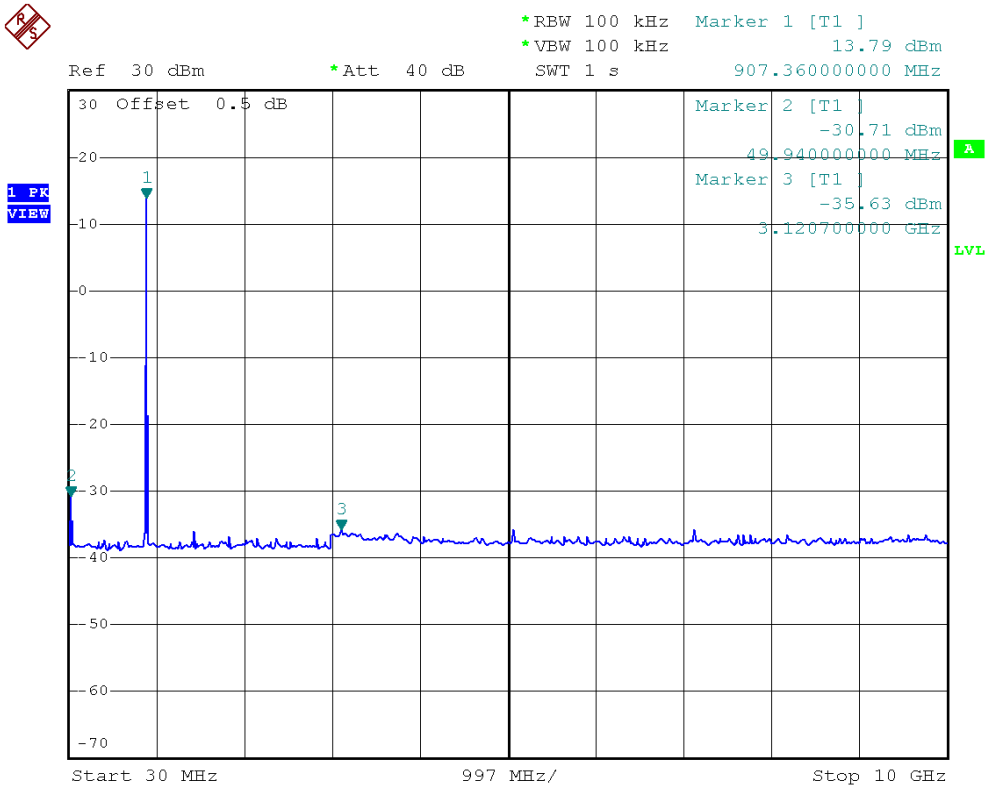
Configuration (11G 5MHz)

922MHz

AVERAGE-UP



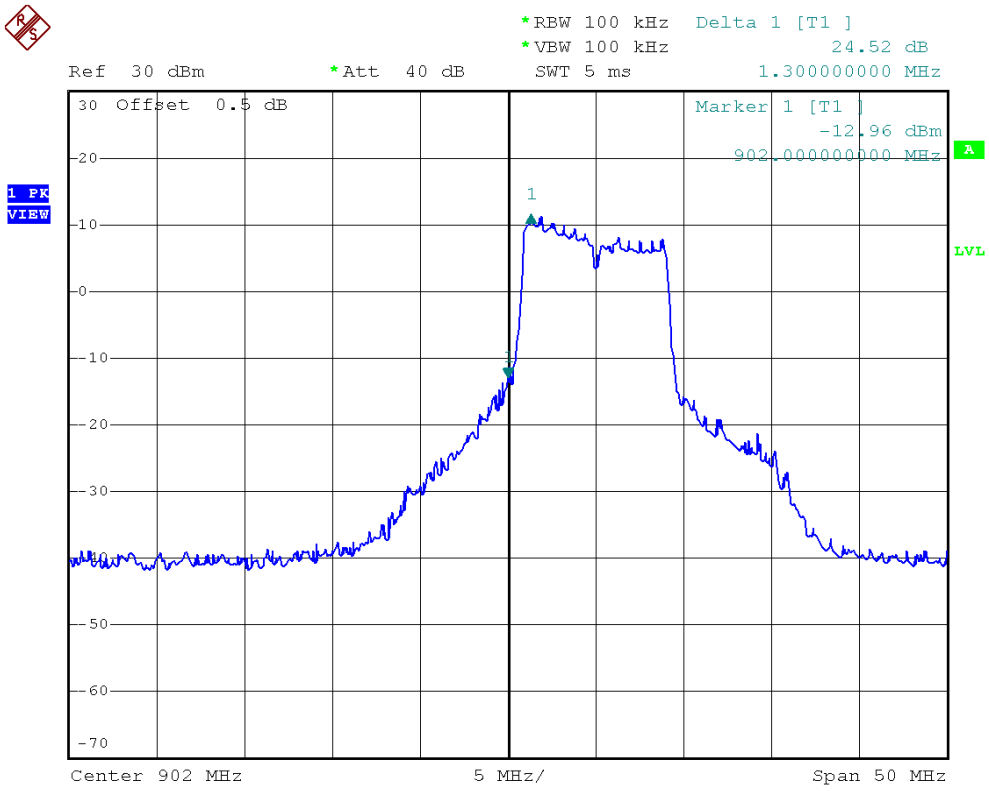
CONDUCTED EMISSION



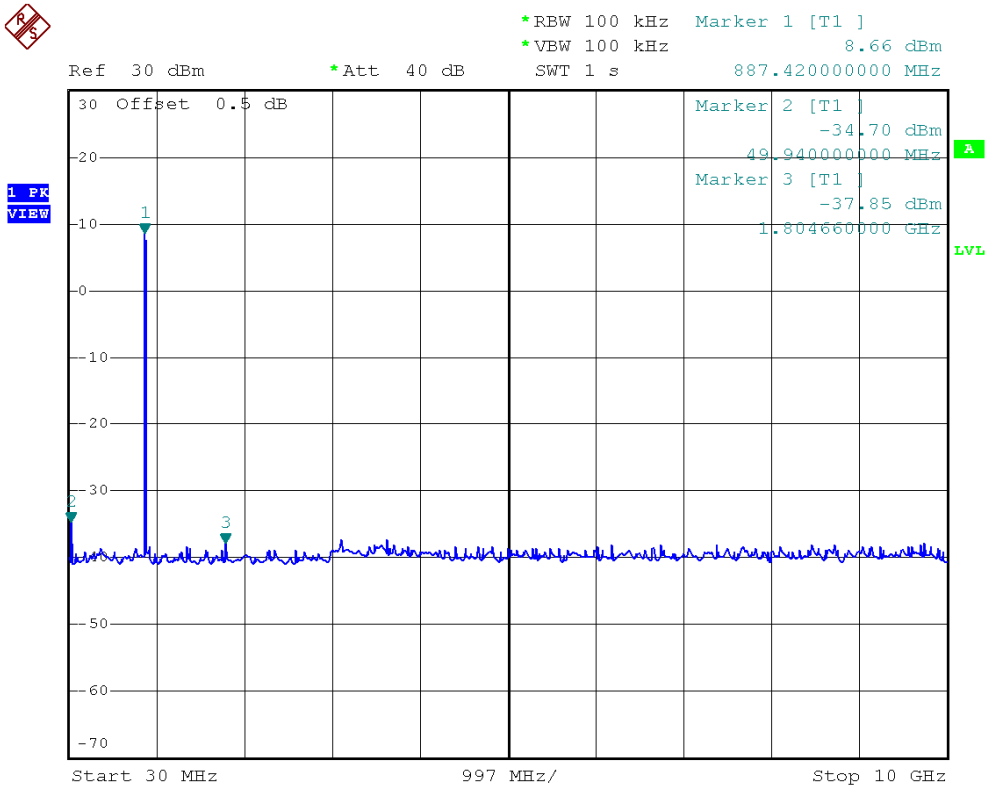
Configuration (11G 10MHz)

907MHz

AVERAGE-LO



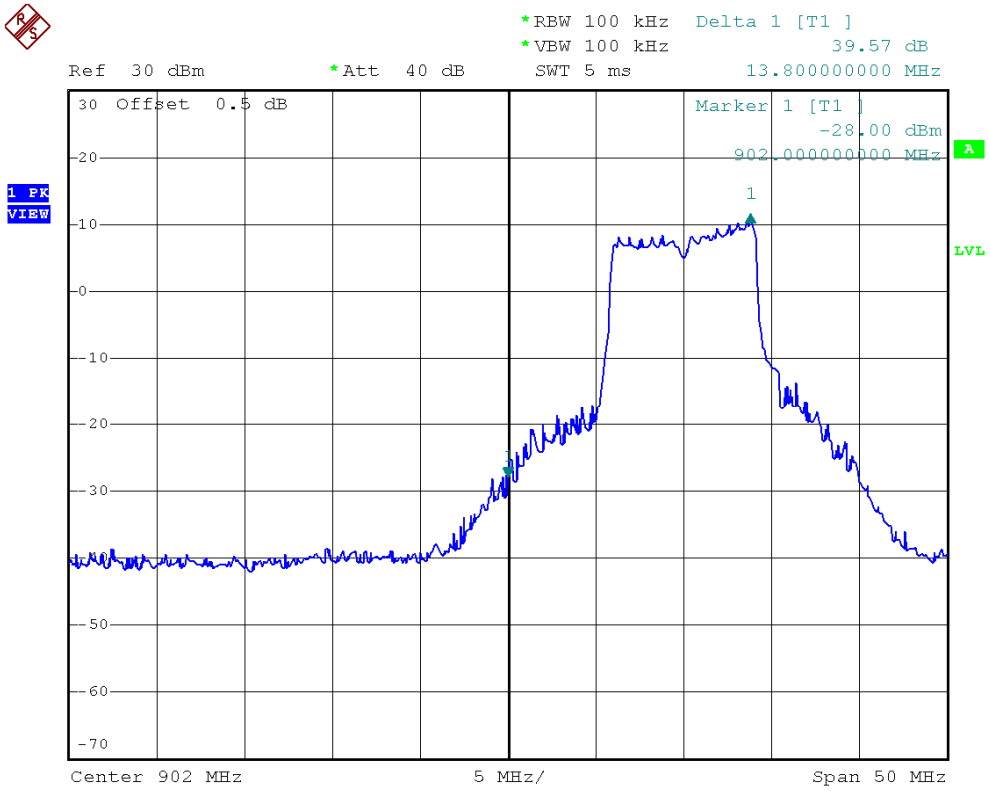
CONDUCTED EMISSION



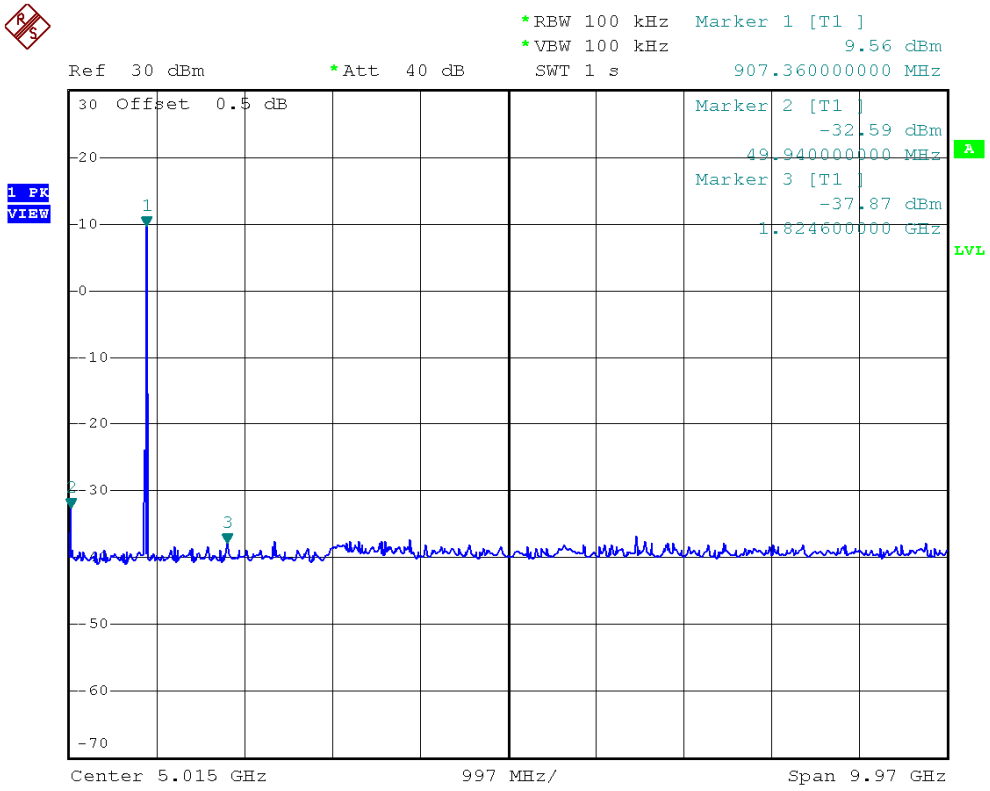
Configuration (11G 10MHz)

912MHz

AVERAGE-LO



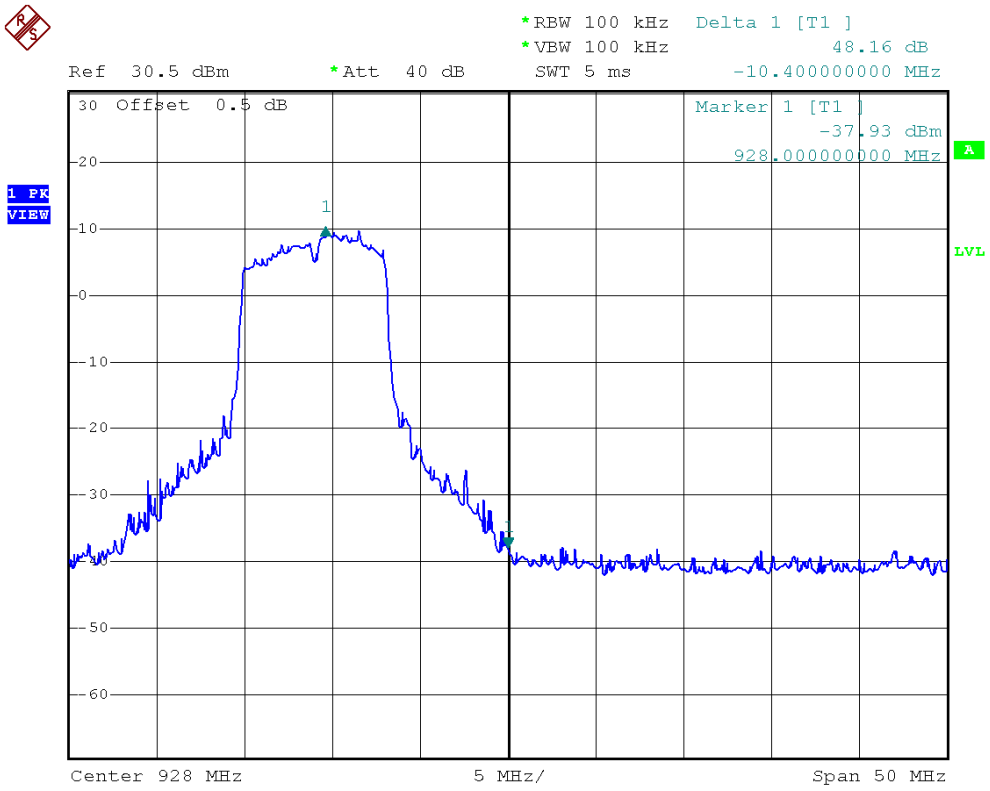
CONDUCTED EMISSION



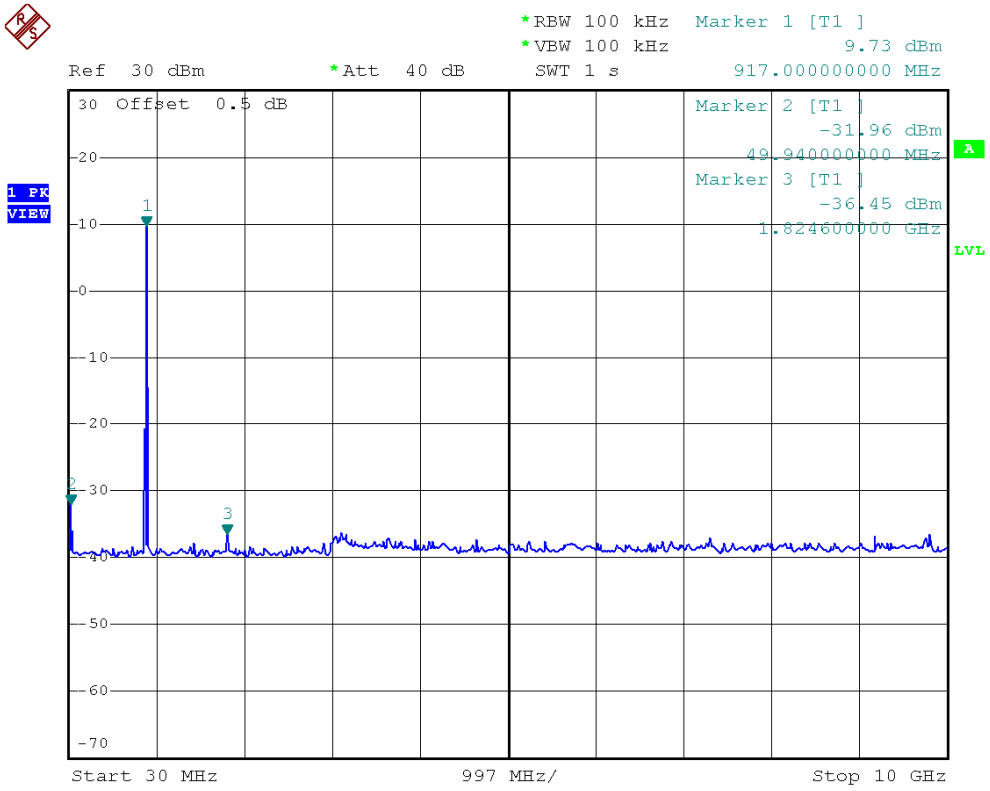
Configuration (11G 10MHz)

917MHz

AVERAGE-UP



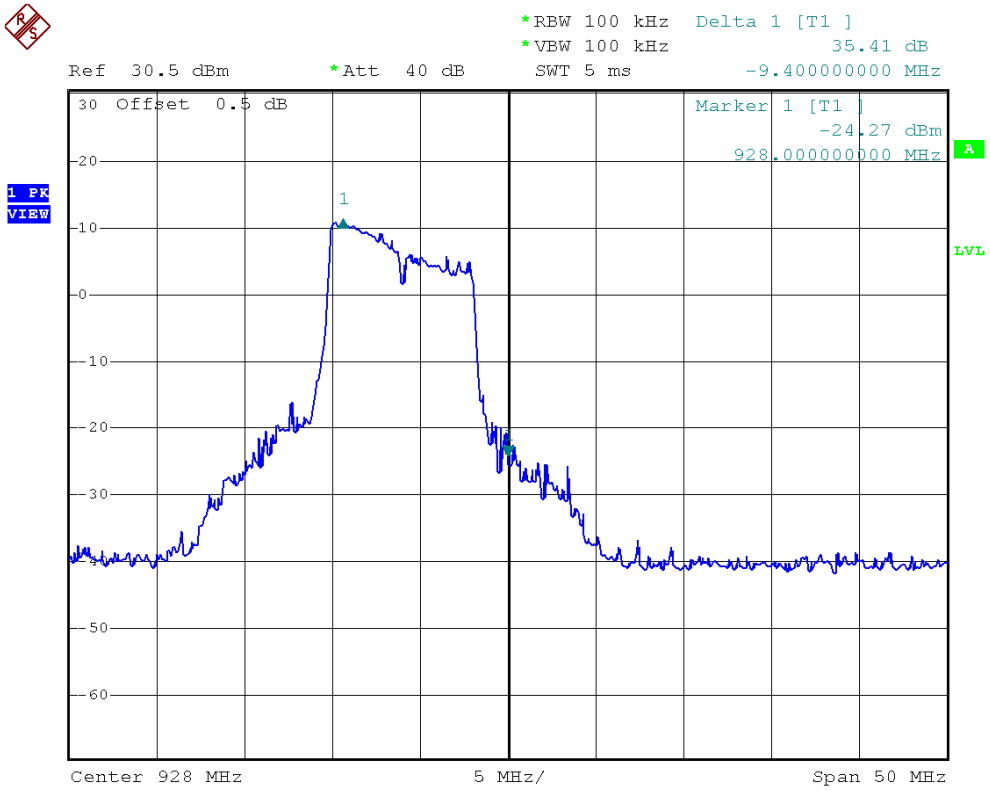
CONDUCTED EMISSION



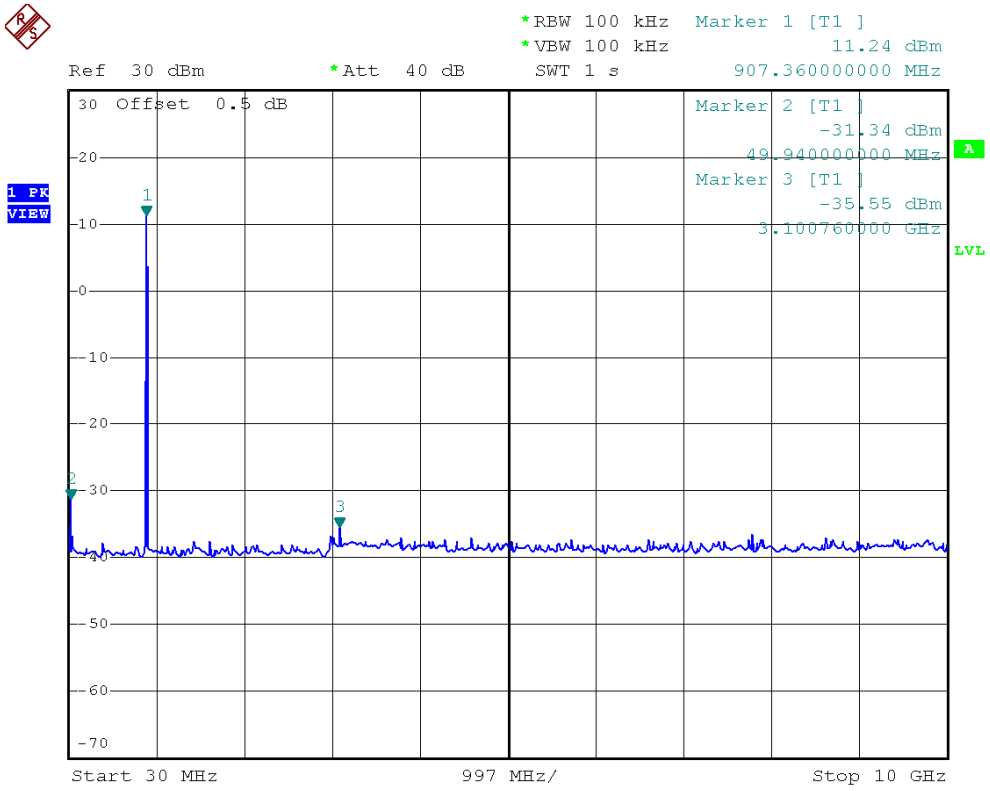
Configuration (11G 10MHz)

922MHz

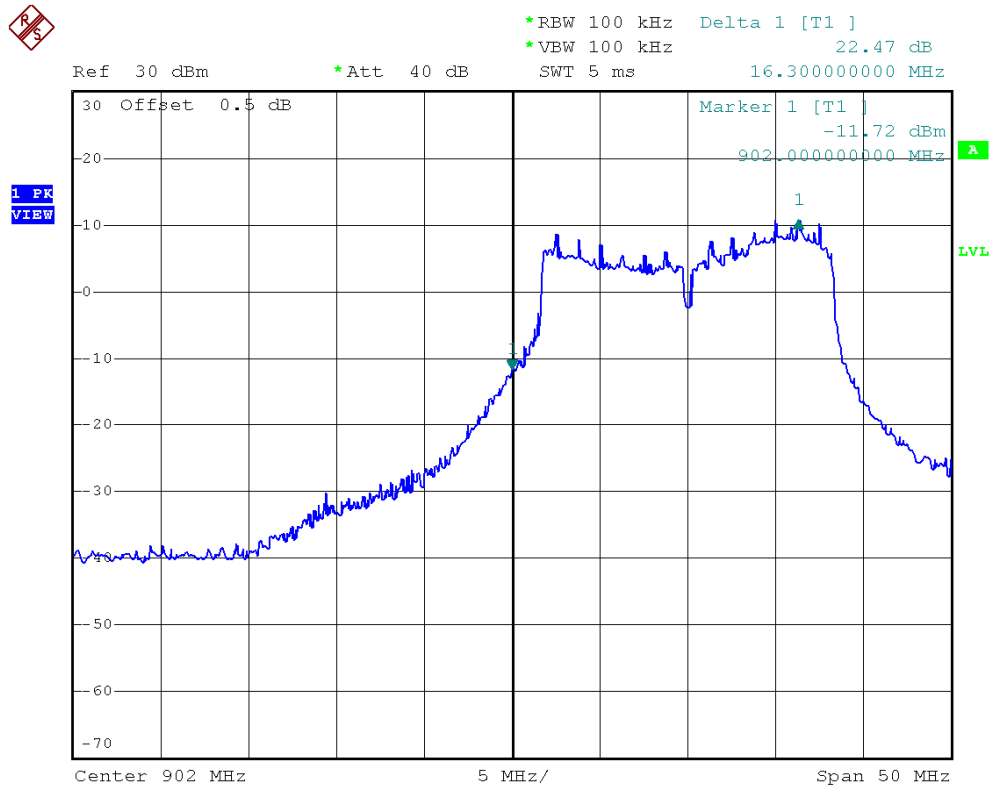
AVERAGE-UP



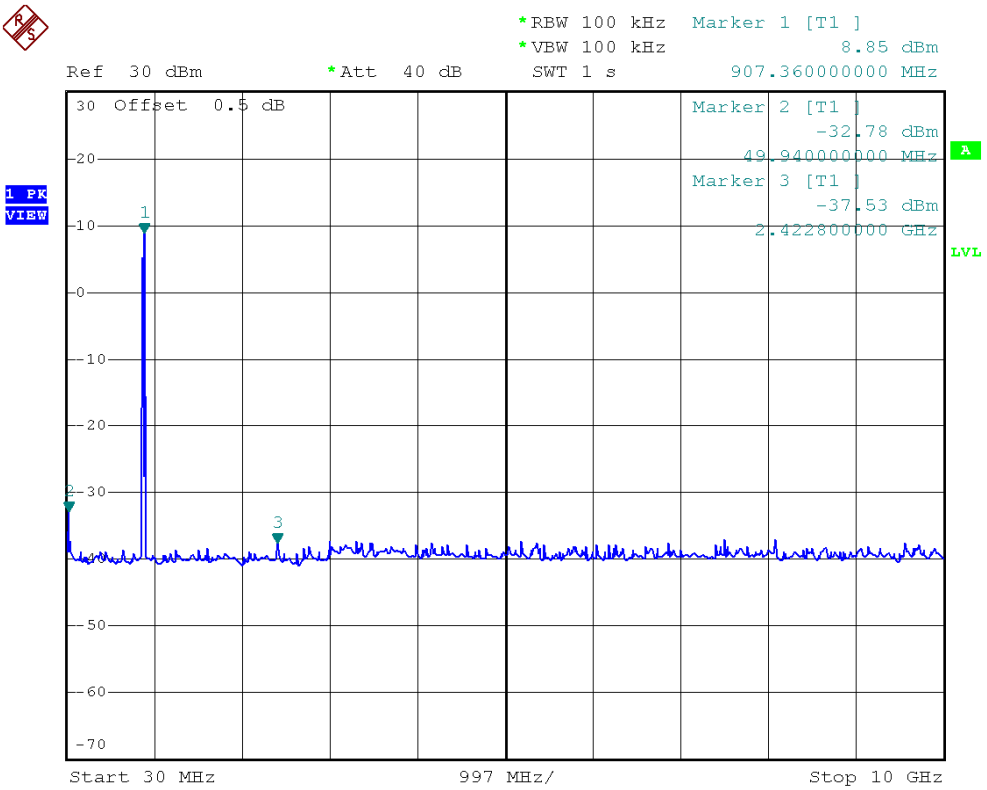
CONDUCTED EMISSION



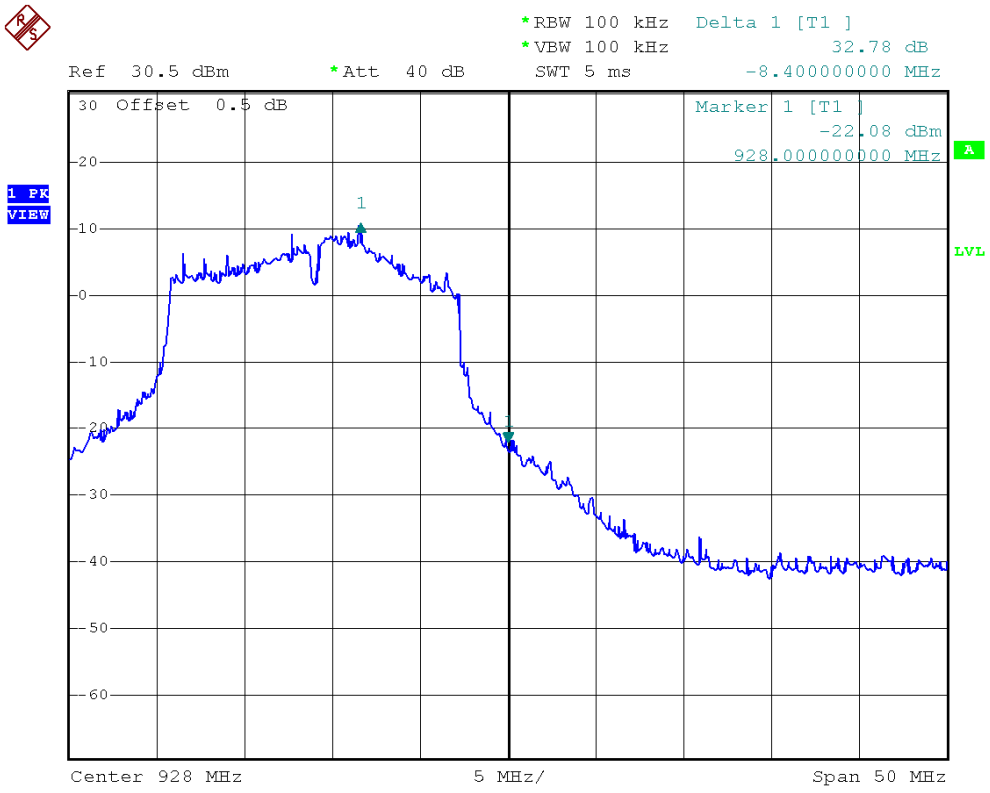
Configuration (11G 20MHz)
912MHz
AVERAGE-LO



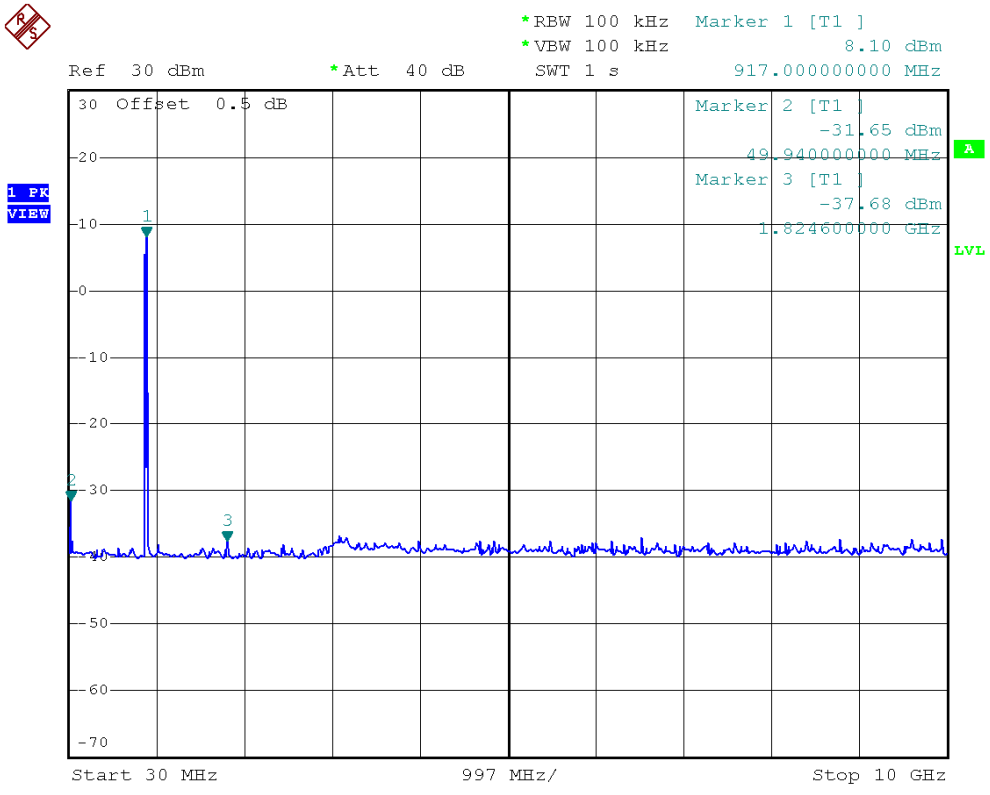
CONDUCTED EMISSION



Configuration (11G 20MHz)
917MHz
AVERAGE-UP



CONDUCTED EMISSION



8. POWER SPECTRAL DENSITY TEST

8.1 APPLIED PROCEDURES / LIMIT

FCC Part15, Subpart C			
Test Item	Limit	Frequency Range (MHz)	Result
Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

8.1.1 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP-40	100129	Aug. 31, 2011

Remark: ” N/A” denotes No Model Name, Serial No. or No Calibration specified.

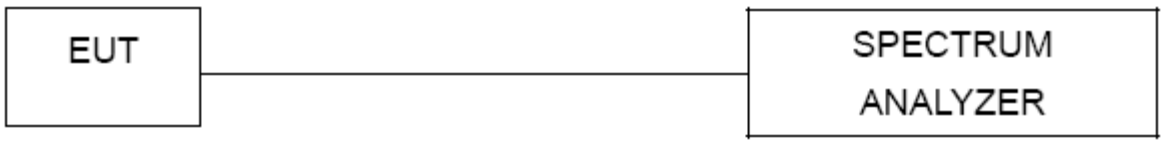
8.1.2 TEST PROCEDURE

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=3KHz, VBW=30KHz, Sweep time = 500s.

8.1.3 DEVIATION FROM STANDARD

No deviation.

8.1.4 TEST SETUP



8.1.5 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.
Chip antenna measurement result.

8.1.6 TEST RESULTS

EUT：	mini-PCI radio Module	Model Name ：	DLM108-RJT
Temperature：	24°C	Relative Humidity：	51%
Test Voltage：	AC 120V/60Hz		
Test Mode ：	TX 907MHz/912MHz/917MHz/922MHz		

Configuration (11B 20MHz)			
Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)	Test Result
912MHz	3.48	8	Compliant
917MHz	4.78	8	Compliant

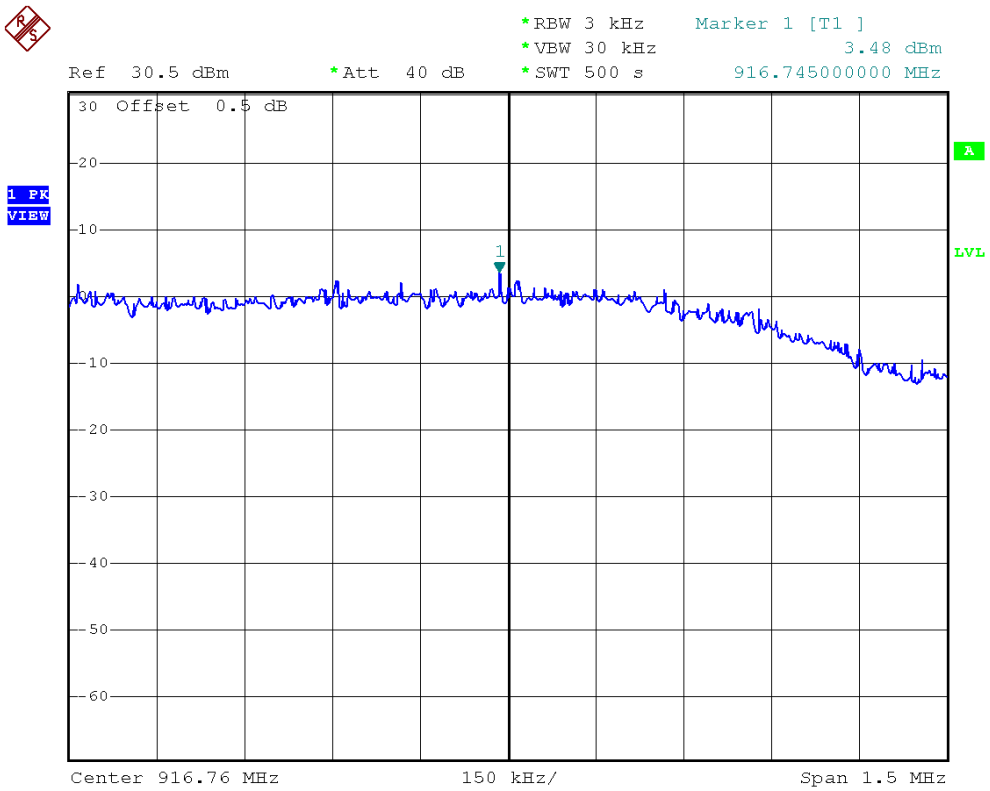
Configuration (11G 5MHz)			
Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)	Test Result
907MHz	2.19	8	Compliant
912MHz	1.16	8	Compliant
917MHz	2.15	8	Compliant
922MHz	2.45	8	Compliant

Configuration (11G 10MHz)			
Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)	Test Result
907MHz	-1.32	8	Compliant
912MHz	-1.11	8	Compliant
917MHz	-0.33	8	Compliant
922MHz	1.95	8	Compliant

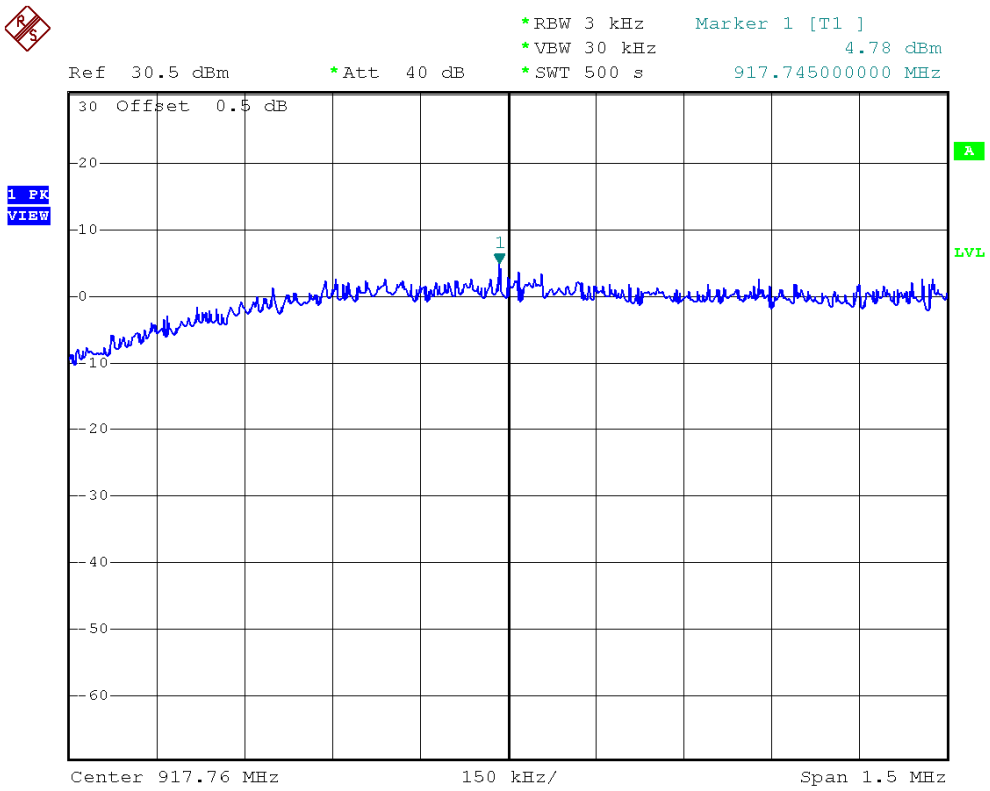
Configuration (11G 20MHz)			
Frequency (MHz)	Power Density (dBm)	LIMIT (dBm)	Test Result
912MHz	-3.06	8	Compliant
917MHz	-0.97	8	Compliant

Configuration (11B 20MHz)

912MHz

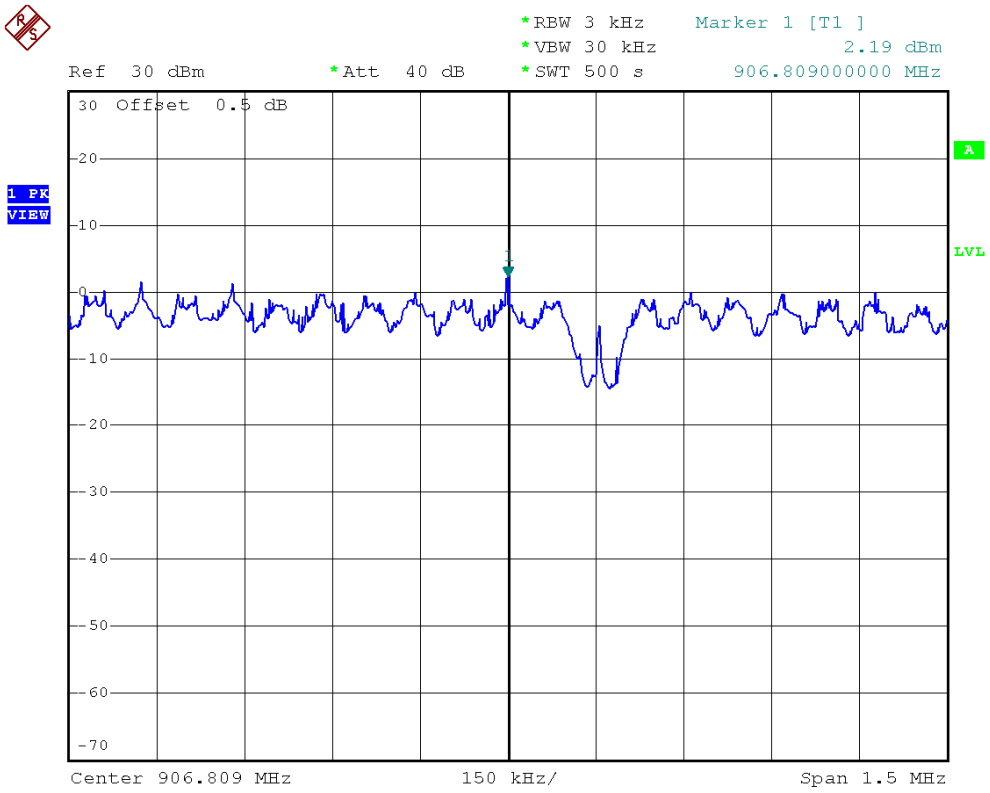


917MHz

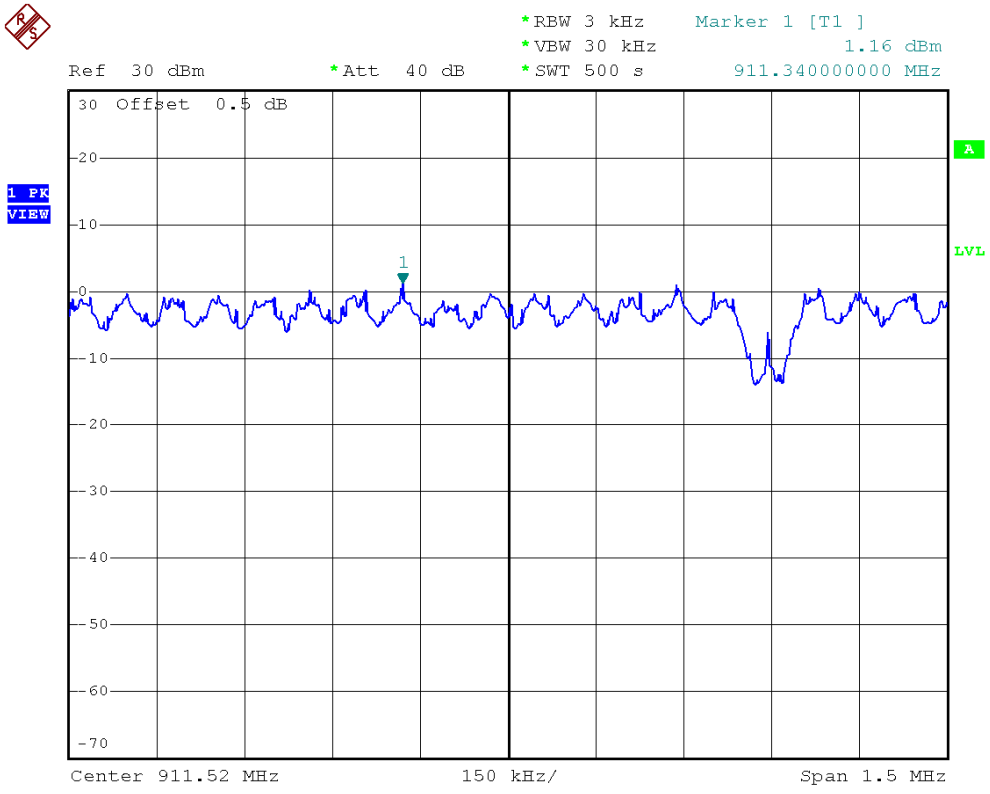


Configuration (5MHz)

907MHz

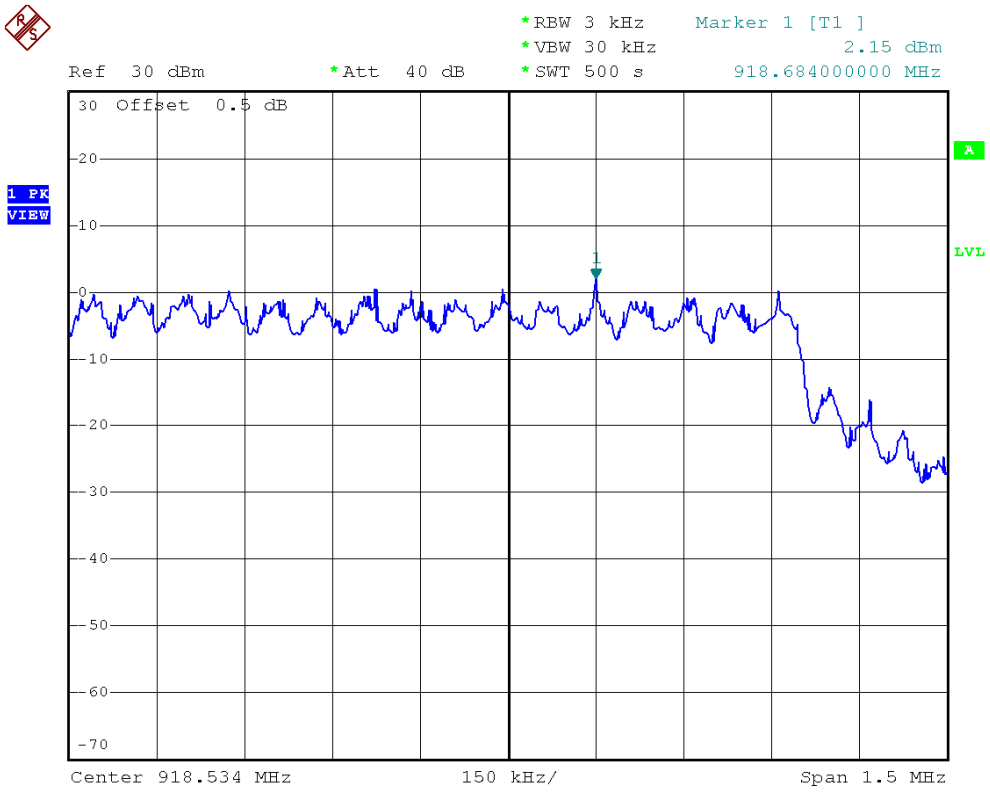


912MHz

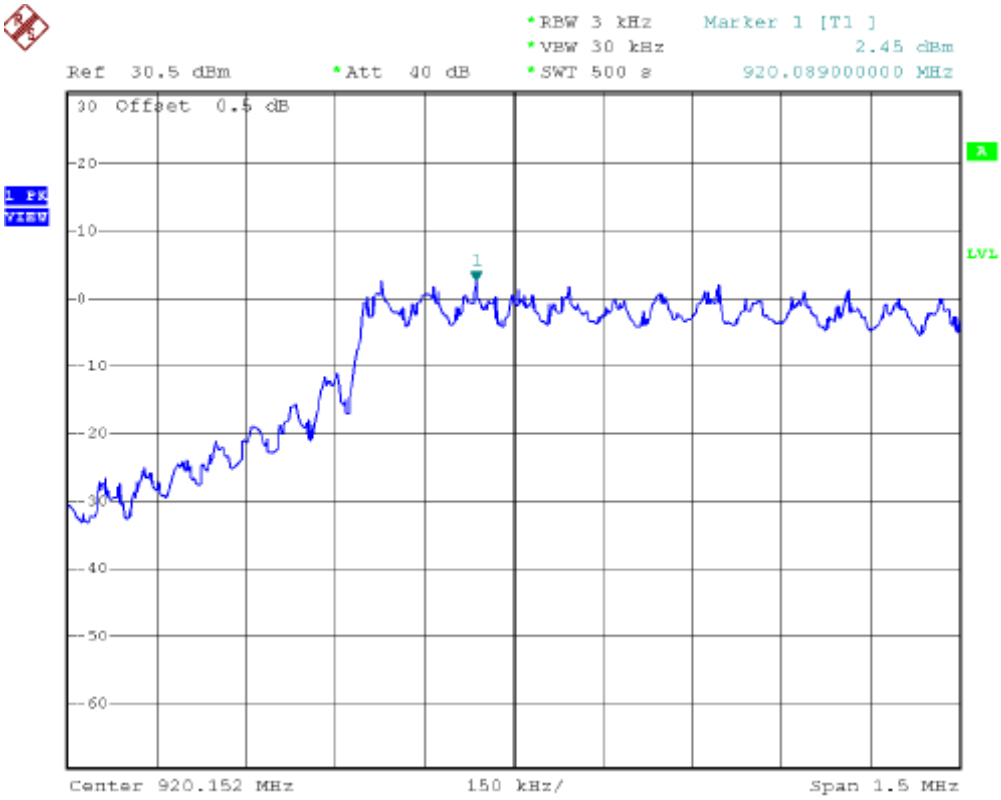


Configuration (5MHz)

917MHz

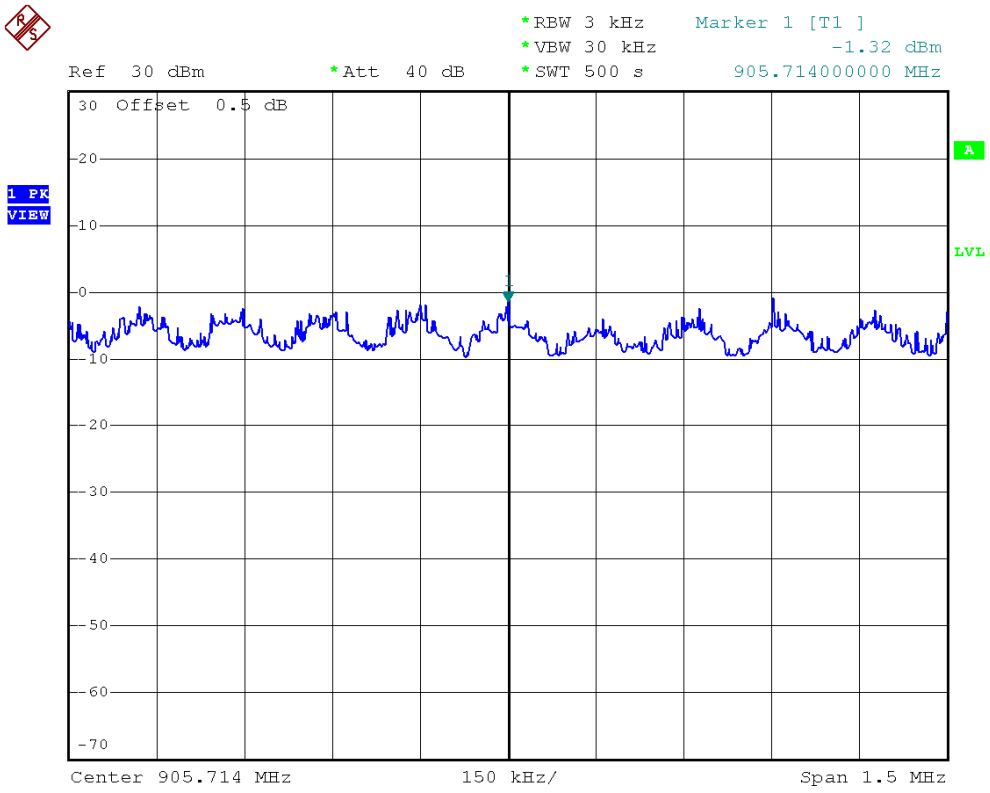


922MHz

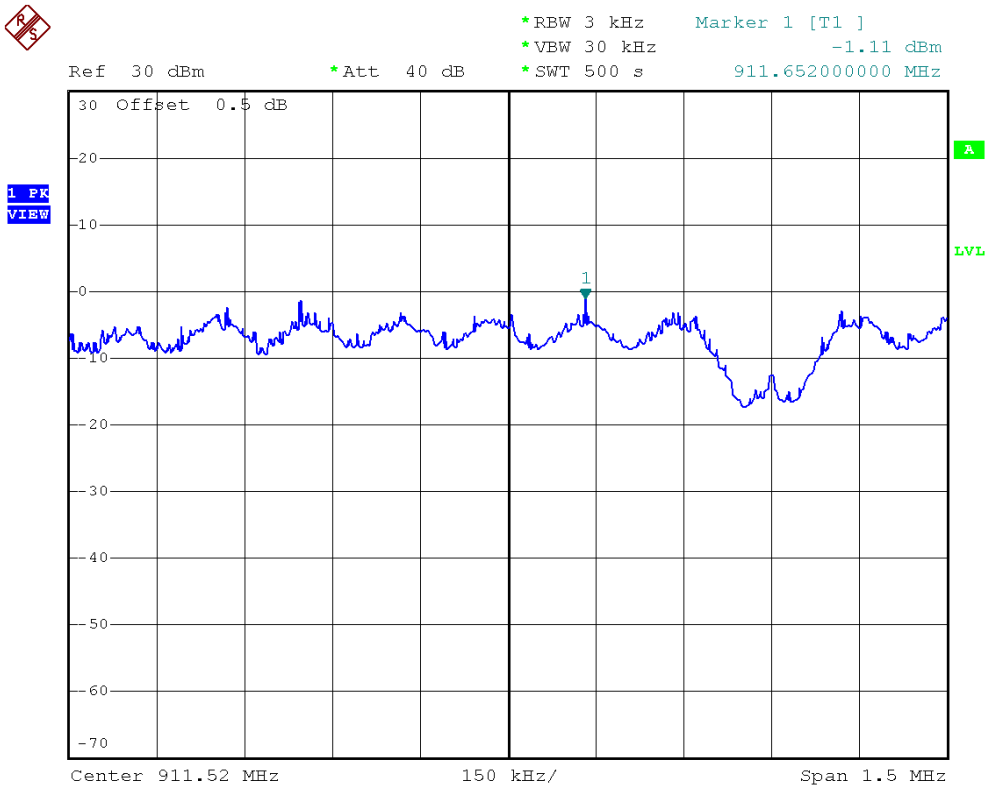


Configuration (11G 10MHz)

907MHz

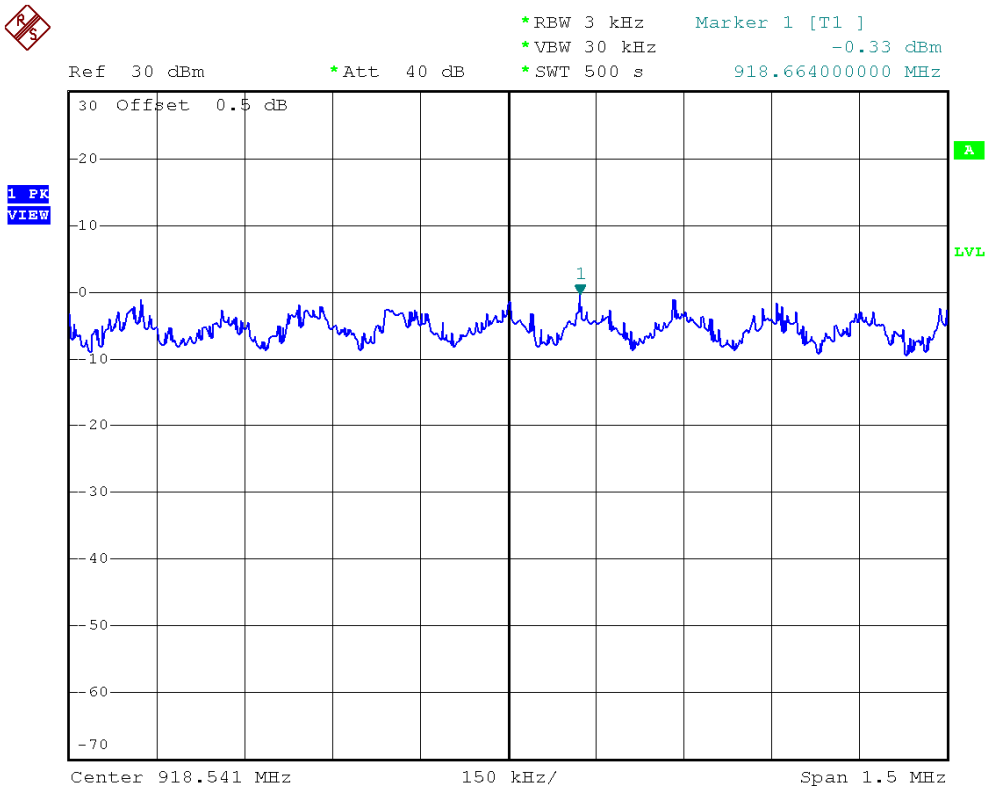


912MHz

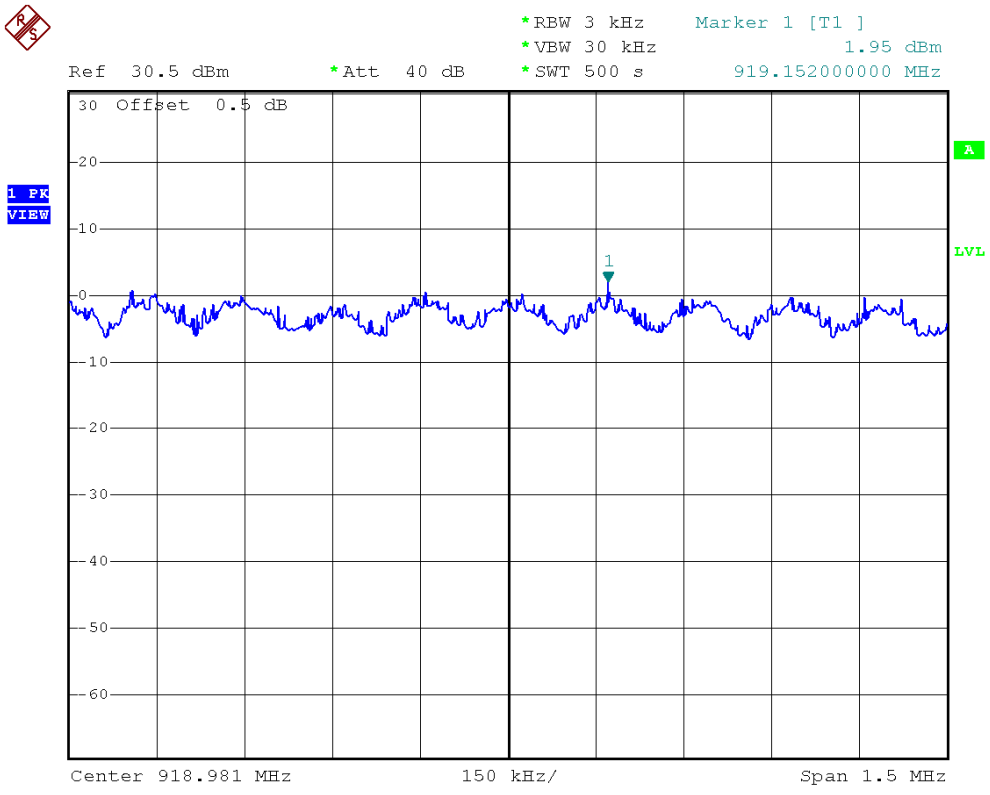


Configuration (11G 10MHz)

917MHz

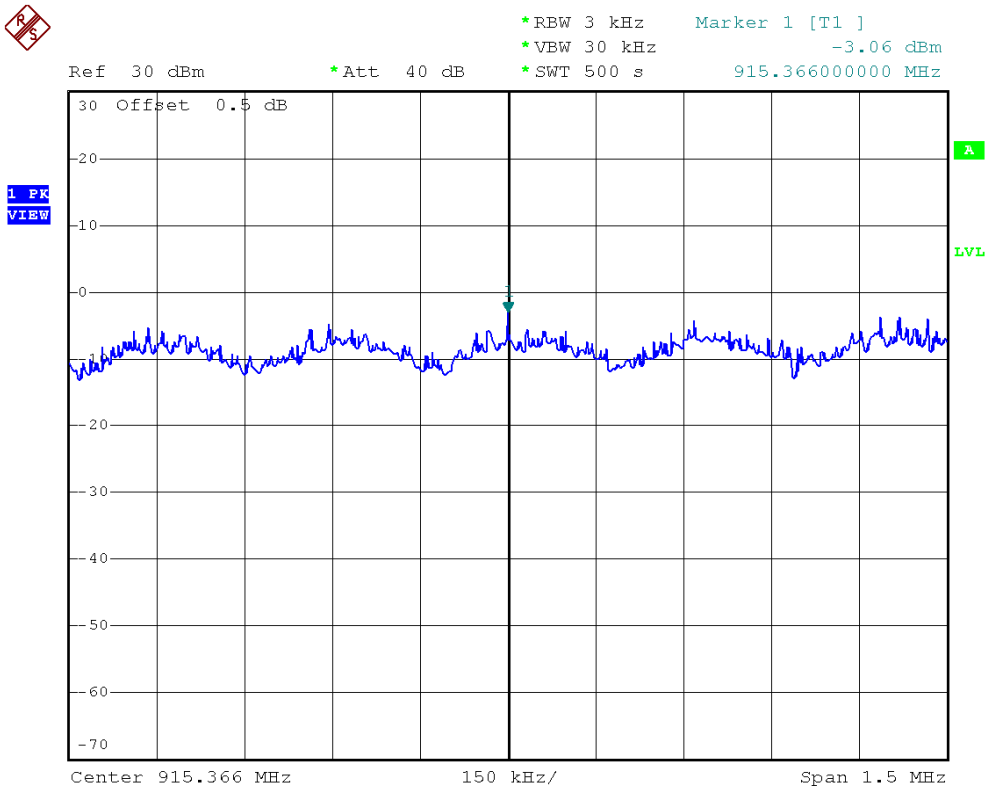


922MHz



Configuration (11G 20MHz)

912MHz



917MHz