



FCC LISTED, REGISTRATION  
NUMBER: 2764.01

ISED LISTED REGISTRATION  
NUMBER: 23595-1

Test report No:  
**2279ERM.006A2**

## Test report

**USA FCC Part 15.247, 15.209  
CANADA RSS-247, RSS-Gen  
Radio Frequency Devices. Operation within the bands 902 - 928 MHz,  
2400 -2483.5 MHz, and 5725 - 5850 MHz.  
Digital Transmission Systems (DTSs), Frequency Hopping Systems  
(FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices.**

Identification of item tested	Wireless Sensor Node
Trademark	AIRTHINGS AS
Model and /or type reference	Wave Mini
Other identification of the product	FCC ID: 2APPT - 2920 IC: 23900-2920
Features	Wave Mini (VOC, Pressure, Temp, Humidity sensors) Visual indicator: Red/Yellow/Green glow point Long battery life Wireless connection Bluetooth or Airthings SmartLink
Manufacturer	Airthings AS Wergelandsveien 7, 0167 Oslo, Norway
Test method requested, standard	USA FCC Part 15.247, 10-1-17 Edition: Operation within the bands 902 - 928 MHz, 2400 -2483.5 MHz, and 5725 - 5850 MHz USA FCC Part 15.209, 10-1-17 Edition: Radiated emission limits; general requirements CANADA RSS-247 Issue 2 (February 2017). CANADA RSS-Gen Issue 4 (November 2014). Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 558074 D01 DTS Meas Guidance v04 dated 05/04/2017. ANSI C63.10-2013: American National Standard for Testing Unlicensed Wireless Devices.
Summary	IN COMPLIANCE
Approved by (name / position & signature)	Domingo Galvez EMC&RF Lab Manager
Date of issue	01-29-2019
Report template No	FDT08_21

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## Competences and guarantees

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DEKRA Certification Inc. is a testing laboratory accredited by A2LA (The American Association for Laboratory Accreditation), to perform the tests indicated in the Certificate 2764.01

DEKRA Certification Inc. is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA Certification Inc. has a calibration and maintenance program for its measurement equipment.

DEKRA Certification Inc. guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated on the report and, it is based on the knowledge and technical facilities available at DEKRA Certification at the time of performance of the test.

DEKRA Certification Inc. is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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## General conditions

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1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA Certification Inc.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA Certification Inc. and the Accreditation Bodies.

## Uncertainty

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Uncertainty (factor  $k=2$ ) was calculated according to the DEKRA Certification internal document PODT000.

Frequency (MHz)	U(k=2)	Units
30-180	3.82	dB
180-1000	2.61	dB
1000-18000	2.92	dB
18000-40000	2.15	dB

## Data provided by the client

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Indoor Air Quality Instrument.

DEKRA declines any responsibility with respect to the information provided by the client and that may affect the validity of results.

## Usage of samples

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Samples undergoing test have been selected by: The client.

Sample S/01 is composed of the following elements:

Control N°	Description	Model	Serial N°	Date of reception
2279.06	Radon Sensor prepared for RF Conducted SRD 915 MHz Testing	Wave Mini	CERT #4	08/08/2018

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1. Sample S/01 has undergone following test(s):

All conducted tests indicated in appendix A.

Sample S/02 is composed of the following elements:

Control N°	Description	Model	Serial N°	Date of reception
2279.02	Radon Sensor prepared for RF Radiated SRD 915 MHz Testing	Wave Mini	CERT # 2	08/08/2018


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1. Sample S/02 has undergone following test(s):

All radiated tests indicated in appendix A.

## Test sample description

Ports..... :	Port name and description		Cable									
			Specified length [m]	Attached during test	Shielded							
	Not provided data			<input type="checkbox"/>	<input type="checkbox"/>							
				<input type="checkbox"/>	<input type="checkbox"/>							
Supplementary information to the ports..... :	Not provided data											
Rated power supply .....	Voltage and Frequency		Reference poles									
			L1	L2	L3	N	PE					
	<input type="checkbox"/>	AC: 230Vac / 50Hz.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	<input type="checkbox"/>	AC:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					
	<input type="checkbox"/>	DC:										
	<input checked="" type="checkbox"/>	DC: 4.5 (3AA Battery)										
Rated Power .....	Not provided data											
Clock frequencies .....	Not provided data											
Other parameters..... :	Not provided data											
Software version .....	1.0											
Hardware version..... :	1.0											
Dimensions in cm (L x W x D) .....	Not provided data											
Mounting position..... :	<input type="checkbox"/>	Table top equipment										
	<input checked="" type="checkbox"/>	Wall/Ceiling mounted equipment										
	<input type="checkbox"/>	Floor standing equipment										
	<input type="checkbox"/>	Hand-held equipment										
	<input type="checkbox"/>	Other:										
Modules/parts .....	Module/parts of test item		Type		Manufacturer							
	Not provided data											
Accessories (not part of the test item) .....	Description		Type		Manufacturer							
	Not provided data											

Documents as provided by the applicant.....:	Description	File name	Issue date
	Declaration Equipment Data	FDT30_14 Declaration Equipment Data	
	Transmission equipment Data	FCC15247+FCC15249_FDT58_02 Test Samples for RF Testing v 1.0_Generic (1)	
Copy of marking plate:			
			

## Identification of the client

AIRTHINGS AS  
Wergelandsveien 7, 0167 Oslo, Norway

## Testing period and place

Test Location	DEKRA Certification Inc.
Date (start)	11-13-2018
Date (finish)	12-3-2018

## Document history

Report number	Date	Description
2279ERM.006	12-20-2018	First release
2279ERM.006A1	01-03-2019	Second release
2279ERM.006A2	01-29-2019	Third release

## Modifications to the reference test report

It was introduced the following modifications in respect to the test report number 2279ERM.006A1 related with the same samples, in the next clauses and sub-clauses:

Clauses/ Sub-Clauses	Modification	Justification
Page 21, 22, 23 /Description/ Graphs	Modified the reference number and graphs.	Documentation error

This modification test report cancels and replaces the test report 2279ERM.006A1

## Environmental conditions

In the control chamber, the following limits were not exceeded during the test:

<b>Temperature</b>	Min. = 15 °C Max. = 35 °C
<b>Relative humidity</b>	Min. = 30 % Max. = 75 %
<b>Air pressure</b>	Min. = 860 mbar Max. = 1060 mbar

In the semi anechoic chamber, the following limits were not exceeded during the test.

<b>Temperature</b>	Min. = 15 °C Max. = 35 °C
<b>Relative humidity</b>	Min. = 30 % Max. = 75 %
<b>Air pressure</b>	Min. = 860 mbar Max. = 1060 mbar

In the chamber for conducted measurements, the following limits were not exceeded during the test:

<b>Temperature</b>	Min. = 15 °C Max. = 35 °C
<b>Relative humidity</b>	Min. = 30 % Max. = 60 %
<b>Air pressure</b>	Min. = 860 mbar Max. = 1060 mbar

## Remarks and comments

The tests have been performed by the technical personnel: Divya Adusumilli and Koji Nishimoto.

## Testing verdicts

Not applicable :	N/A
Pass :	P
Fail :	F
Not measured :	N/M

## Summary

FCC PART 15 PARAGRAPH / RSS-247 (Bluetooth Low Energy)					
Section	15.247 Spec Clause	RSS Spec Clause	Test Description	Verdict	Remark
A.1	§ 15.247 (a) (1)	RSS-247 5.1 (b)	20 dB Bandwidth and Carrier Frequency Separation	P	N/A
A.2	§ 15.247 (a) (1) (i)	RSS-247 5.1. (c)	Number of hopping channels	P	N/A
A.3	§ 15.247 (a) (1) (i)	RSS-247 5.1. (c)	Time of Occupancy (Dwell Time)	P	N/A
A.3	§ 15.247 (b) (2)	RSS-247 5.4. (a)	Maximum peak conducted output power and antenna gain	P	N/A
A.4	§ 15.247 (d)	RSS-247 5.5.	Band-edge emissions compliance (Transmitter)	P	N/A
A.5	§ 15.247 (d)	RSS-247 5.5.	Emission limitations conducted (Transmitter)	P	N/A
A.6	§ 15.247 (d)	RSS-247 5.5.	Emission limitations radiated (Transmitter)	P	N/A
<u>Notes:</u> None					

## List of equipment used during the test

### Conducted Measurements

Test system Rohde & Schwarz TS 8997:

CONTROL NUMBER	DESCRIPTION	LAST CALIBRATION	NEXT CALIBRATION
1039	Signal analyzer Rohde & Schwarz FSV40	2017/03	2019/03
1040	Switch unit Rohde & Schwarz with power detector OSP120 / OSP-B157	2017/03	2019/03
1041	RF generator Rohde & Schwarz SMB100A	2017/04	2019/04
1042	RF generator Rohde & Schwarz SMBV100A	2018/01	2019/01
101	Climatic chamber Espec	2017/12	2018/12

### Radiated Measurements

CONTROL NUMBER	DESCRIPTION	LAST CALIBRATION	NEXT CALIBRATION
1179	Semi anechoic Absorber Lined Chamber Frankonia SAC 3 plus "L"	N/A	N/A
1065	BiconicalLog antenna ETS LINDGREN 3142E	2017/03	2020/03
1058	Double-ridge Waveguide Horn antenna 1-18 GHz	2017/03	2019/03
1014	Spectrum analyzer Rohde & Schwarz FSV40	2017/03	2019/03
0980	RF pre-amplifier 30 MHz-6 GHz Bonn Elektronik BLMA 0360-01N	2017/05	2019/05
0981	RF pre-amplifier 1-18 GHz Bonn Elektronik BLMA 0118-2A	2017/05	2019/05
1015, 1017, 1019, 1020	Rohde & Schwarz EMC32 software	N/A	N/A

## Appendix A: Test results

# Appendix A Content

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## PRODUCT INFORMATION

The following information is provided by the client

Information	Description
Modulation	FHSS
RF Output Power	14 dBm
Operation mode 1: Single Antenna Equipment	Equipment with only one antenna
- Operating Frequency Range	902 - 928 MHz
- Nominal Channel Bandwidth	200 KHz
Extreme operating conditions	
- Temperature range	-20 °C to +54 °C
Antenna type	Integral antenna
Antenna gain	+5 dBi
Nominal Voltage	
- Supply Voltage	4.5 Vdc
- Type of power source	DC voltage from battery
Equipment type	SRD
Geo-location capability	No

Test modes available:

- Continuous modulated carrier at 905 MHz, 915 MHz and 926 MHz
- Continuous reception at 905 MHz, 915 MHz and 926 MHz

## DESCRIPTION OF TEST CONDITIONS

TEST CONDITIONS	DESCRIPTION
TC#01	<p><u>Power supply (V):</u>  <math>V_{\text{nominal}} = 4.5 \text{ Vdc}</math></p> <p><u>Type of power suppl:</u>  DC voltage from internal rechargeable battery.</p> <p><u>Temperature (°C):</u>  <math>T_{\text{nom}} = +15 \text{ to } +35</math>  <math>T_{\text{min}} = -20 (*)</math>  <math>T_{\text{max}} = +54 (*)</math></p> <p>The subscript nom indicates normal test conditions.  The subscripts min and max indicate extreme test conditions (minimum and maximum respectively).  N/A: Not Applicable.  (*) Declared by applicant.</p> <p><u>Test Frequencies for Conducted tests:</u>  Lowest channel: 905 MHz  Middle channel: 915 MHz  Highest channel: 926 MHz</p> <p><u>Test Frequencies for Radiated tests:</u>  Lowest range: 905 MHz  Middle channel: 915 MHz  Highest channel: 926 MHz</p>

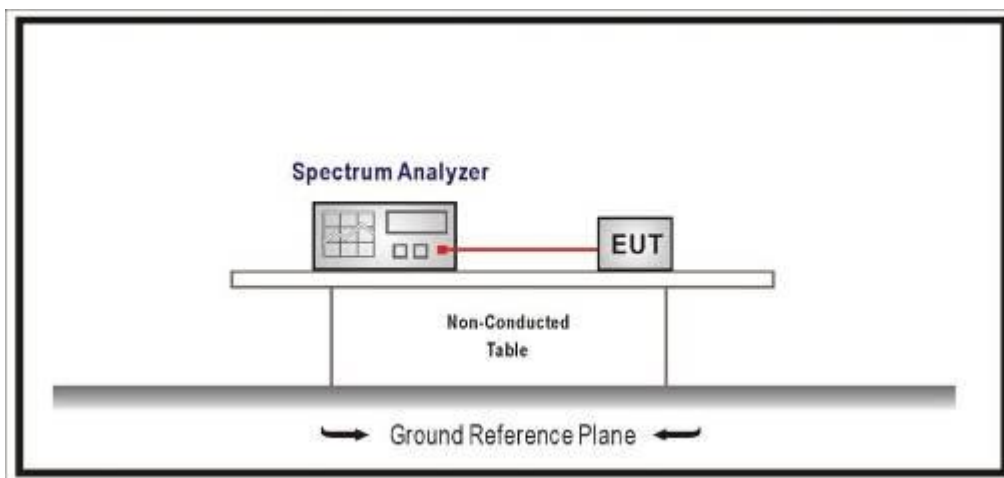
## TEST A.1: 20 DB BANDWIDTH AND CARRIER FREQUENCY SEPARATION

<b>LIMITS:</b>	Product standard:	Part 15 Subpart C §15.247 and RSS-247
	Test standard:	Part 15 Subpart C §15.247(a)(1) and RSS-247 5.1(b)

### LIMITS

Frequency Hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 KHz or the 20 dB Bandwidth of the hopping channel, whichever is greater.

### TEST SETUP:

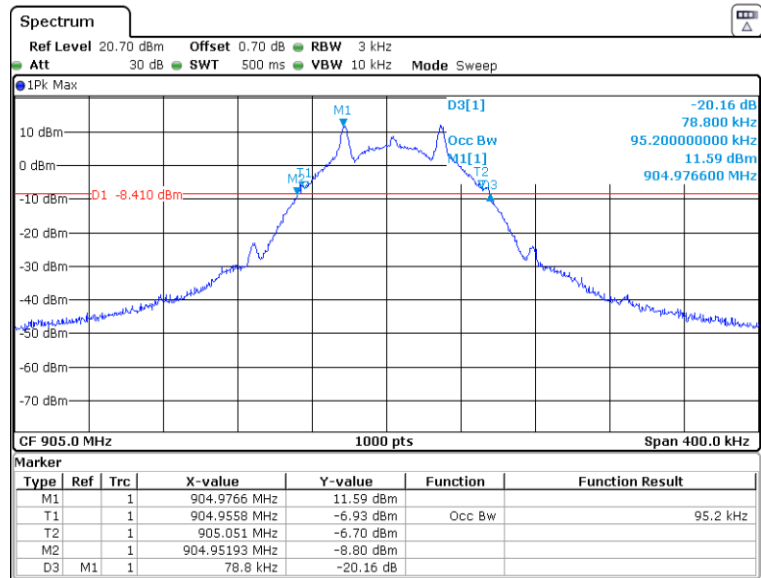


<b>TESTED SAMPLES:</b>	S/01
<b>TESTED CONDITIONS MODES:</b>	TC#01
<b>TEST RESULTS :</b>	PASS

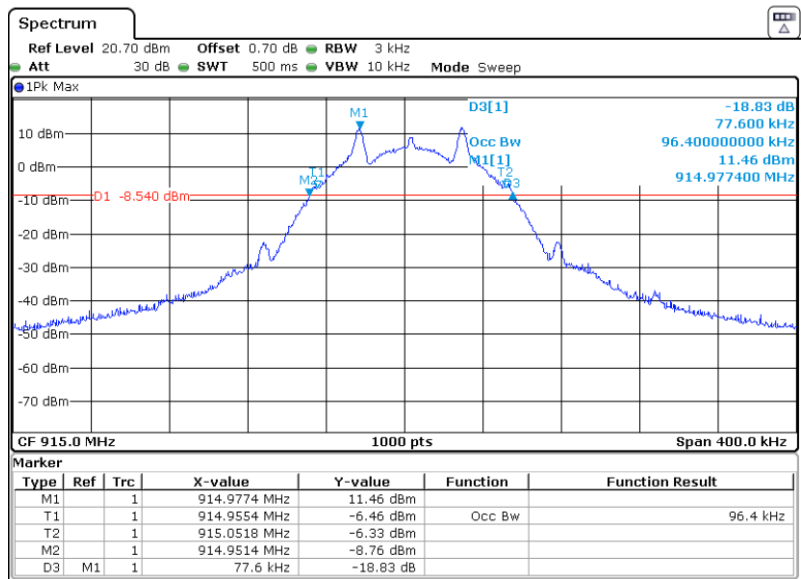
	Lowest frequency 905 MHz	Middle frequency 915 MHz	Highest frequency 926 MHz
20 dB Spectrum bandwidth (KHz)	78.8	77.6	77.2
Measurement uncertainty (kHz)	<± 5.00		

TEST RESULTS (Cont.):

Lowest Channel

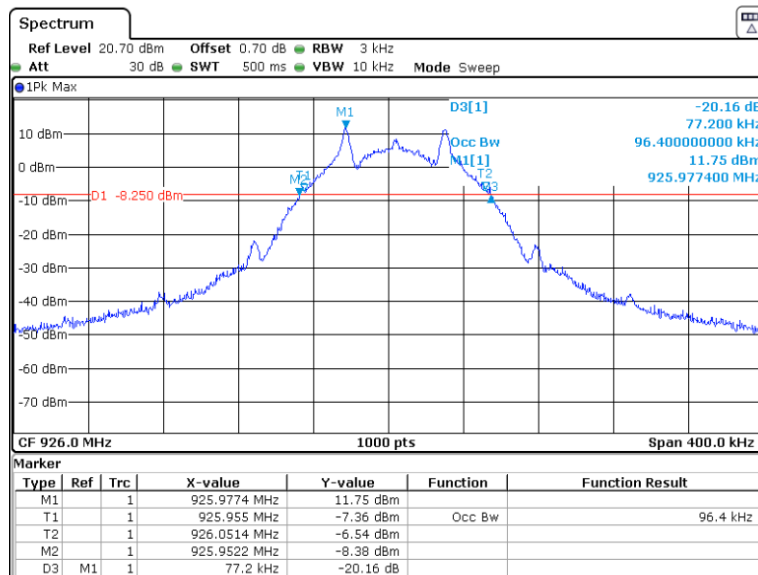


Middle Channel

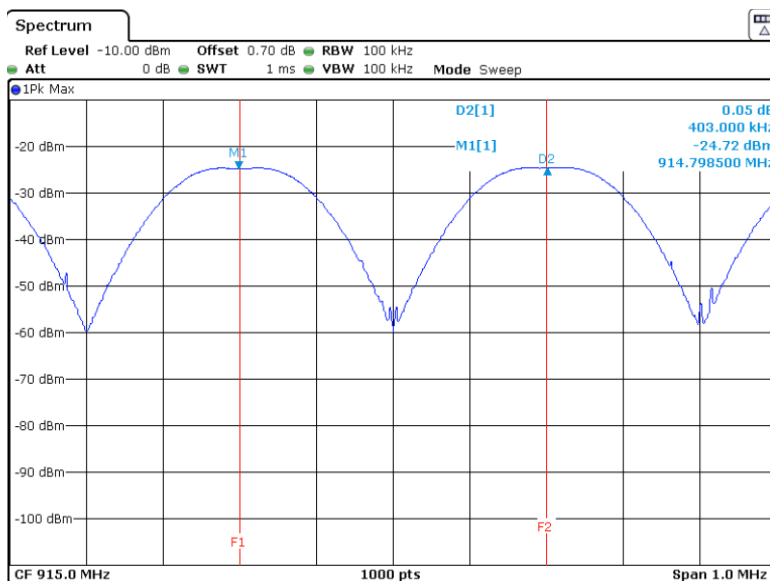


## TEST RESULTS (Cont.)

### Highest Channel



### CARRIER FREQUENCY SEPARATION



The hopping channel carrier frequencies are separated by a minimum of the of the 20 dB bandwidth of the hopping channel.

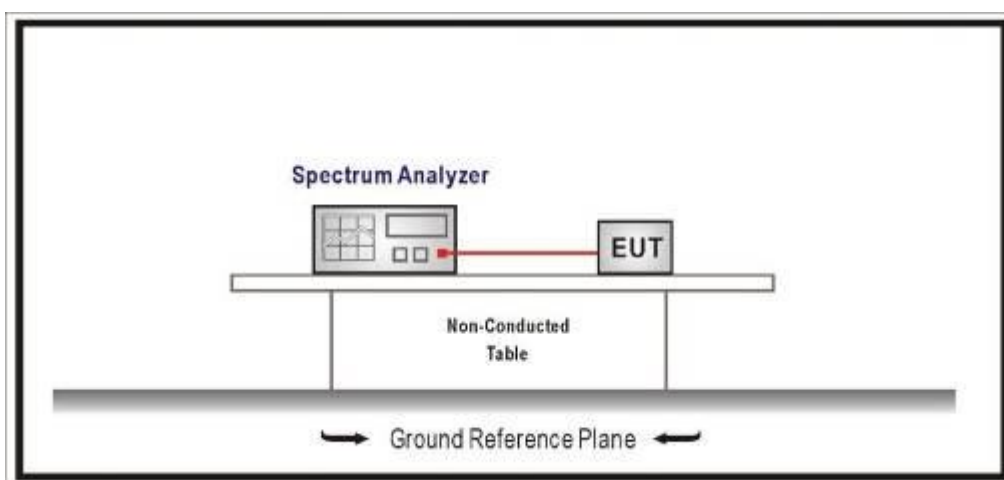
## TEST A.2: NUMBER OF HOPPING CHANNELS

<b>LIMITS:</b>	Product standard:	Part 15 Subpart C §15.247 and RSS-247
	Test standard:	Part 15 Subpart C §15.247(a)(1)(i) and RSS-247 5.1(c)

### LIMITS

Frequency hopping system in the 902-928 MHz band shall use at least 50 hopping frequencies.

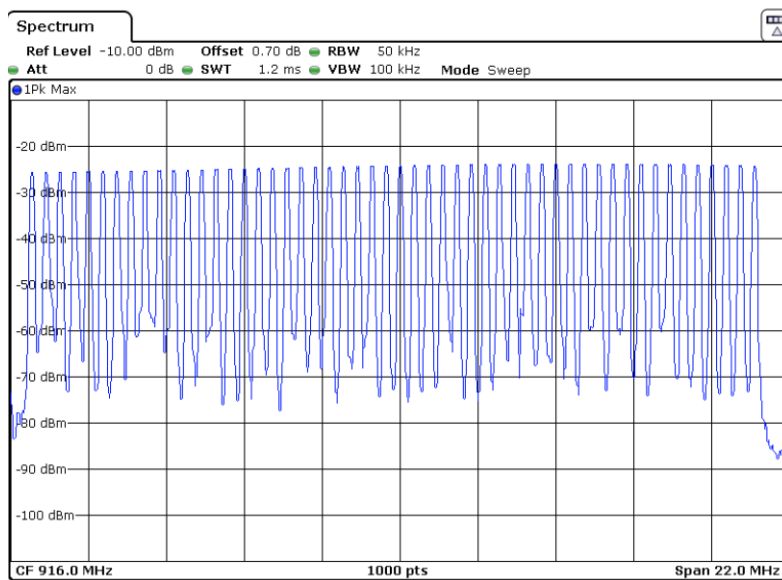
### TEST SETUP:



<b>TESTED SAMPLES:</b>	S/01
<b>TESTED CONDITIONS MODES:</b>	TC#01
<b>TEST RESULTS:</b>	PASS

The Number of hopping channels is 52 (See next plot).

## TEST RESULTS (Cont.):



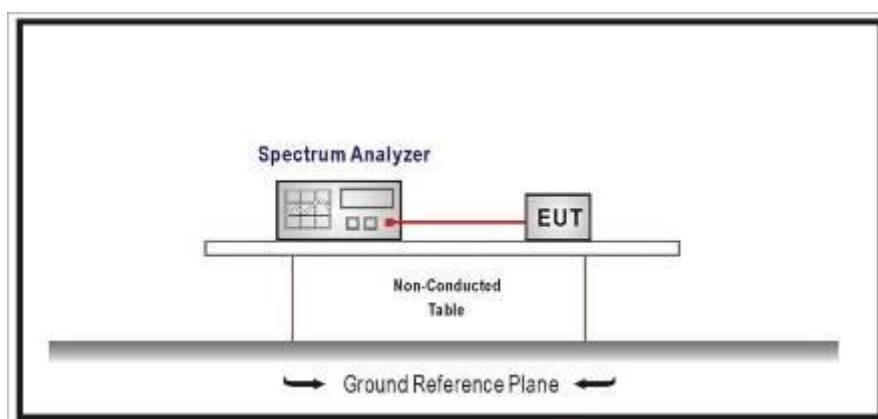
## TEST A.3: TIME OF OCCUPANCY (DWELL TIME)

<b>LIMITS:</b>	Product standard:	Part 15 Subpart C §15.247 and RSS-247
	Test standard:	Part 15 Subpart C §15.247(a)(1)(i) and RSS-247 5.1(c)

### LIMITS

The average time of occupancy on any frequency shall not be greater than 0.4 seconds (400 ms) within 20 second period.

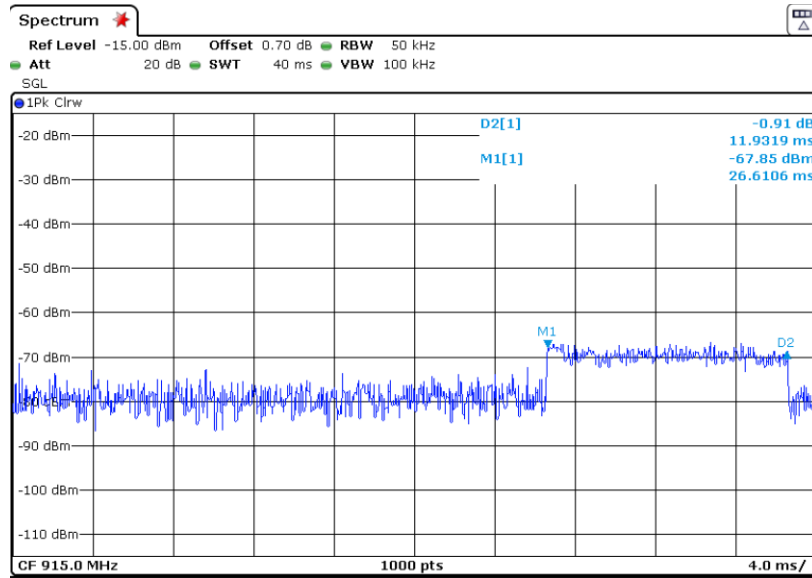
### TEST SETUP:



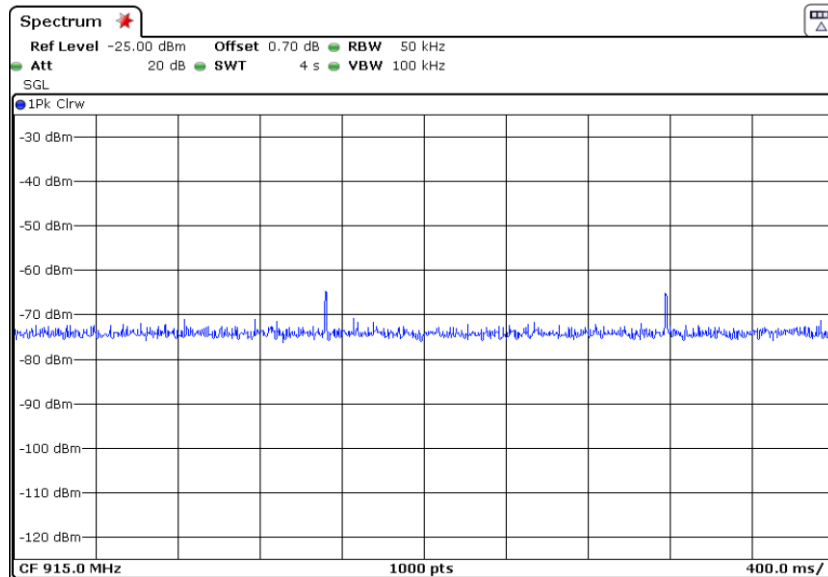
<b>TESTED SAMPLES:</b>	S/01
<b>TESTED CONDITIONS MODES:</b>	TC#01
<b>TEST RESULTS:</b>	PASS

- Tx- time per hop = 11.93 ms (see next plot).

## TEST RESULTS (Cont.):



Number of hops over a period of 4 seconds = 2 (see next plot).



Number of hops in the period specified in the requirements = (2 hops) x (21.2 s / 4 s) = 10.6 hops.

Averaging time of occupancy = 11.93 ms x 10.6 hops = 126.46 ms per 21.2 second period (52 hopping frequencies).

Measurement uncertainty (%)

<±0.01

## TEST A.4: MAXIMUM OUTPUT POWER AND ANTENNA GAIN

<b>LIMITS:</b>	Product standard:	Part 15 Subpart C §15.247 and RSS-247
	Test standard:	Part 15 Subpart C §15.247(b)(2) and RSS-247 5.4(a)

### LIMITS

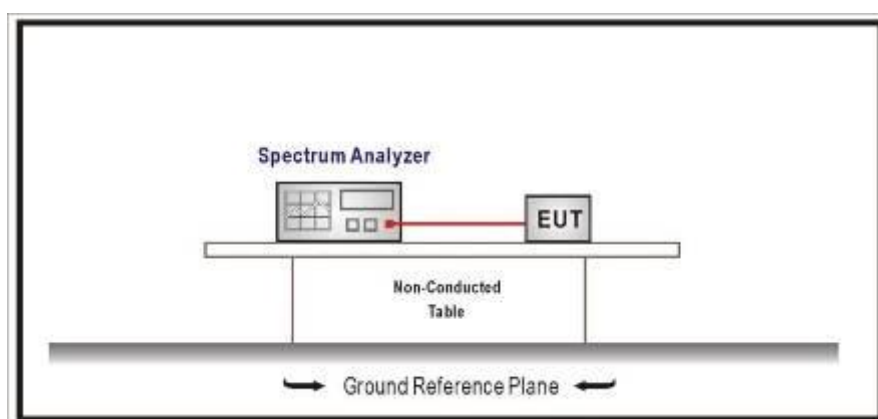
For frequency hopping systems operating in the 902-928 MHz band: 1 watt (30 dBm) for systems employing at least 50 hopping channels.

The e.i.r.p. shall not exceed 4 W (36 dBm) (Canada).

### **TEST SETUP:**

The maximum peak conducted output power was measured using the method according to point 9.2.2.2 of Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under §15.247 558074 D01 DTS Meas Guidance v04 dated 05/04/2017.

The EIRP power (dBm) is calculated by adding the declared maximum antenna gain to the measured conducted power.



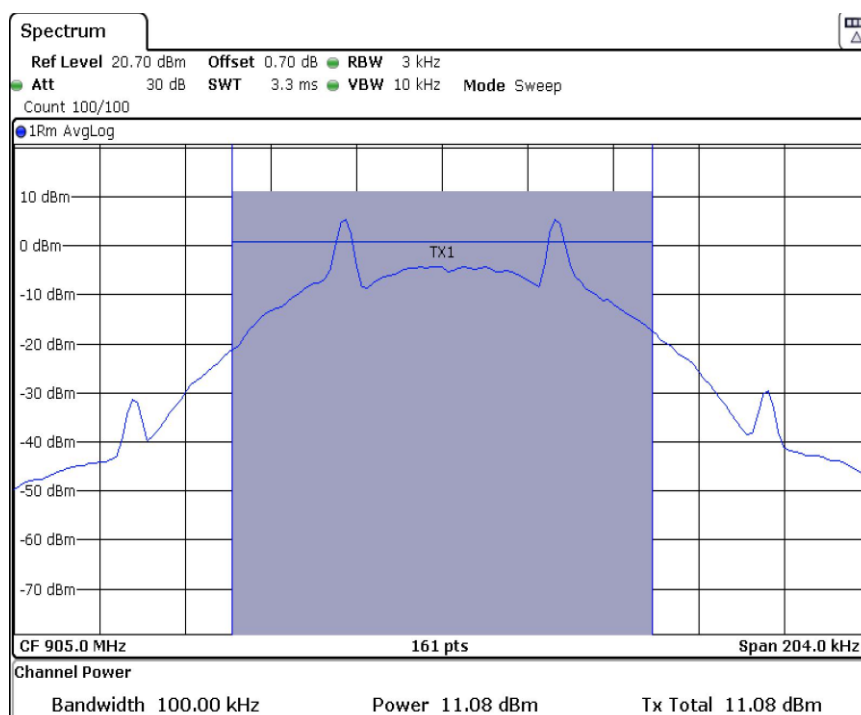
TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#01
TEST RESULTS:	PASS

Maximum declared antenna gain: +5dBi.

	Lowest frequency 905 MHz	Middle frequency 915 MHz	Highest frequency 926 MHz
Maximum Conducted Power (dBm)	11.08	11.01	11.05
Maximum EIRP power (dBm)	16.08	16.01	16.05
Measurement uncertainty (dB)	<±0.78		

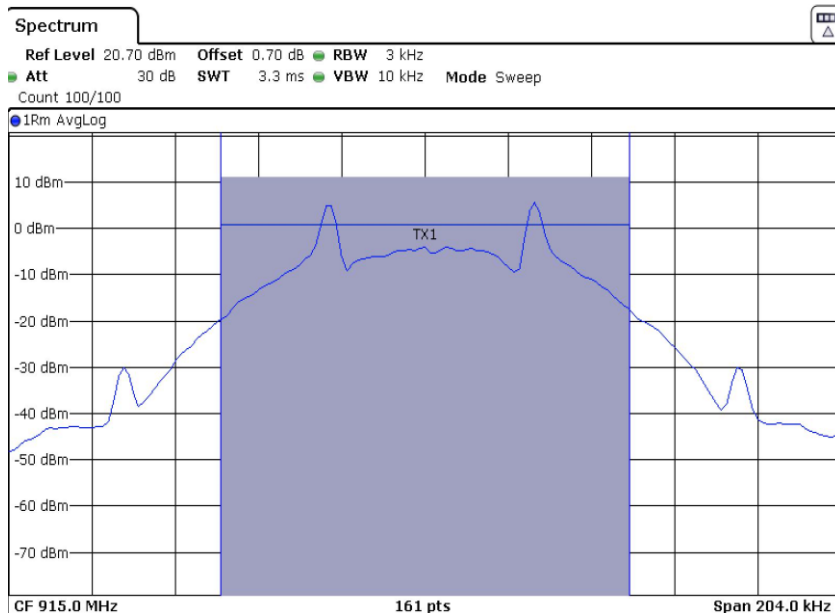
MAXIMUM OUTPUT POWER. See next plots.

### Lowest Channel

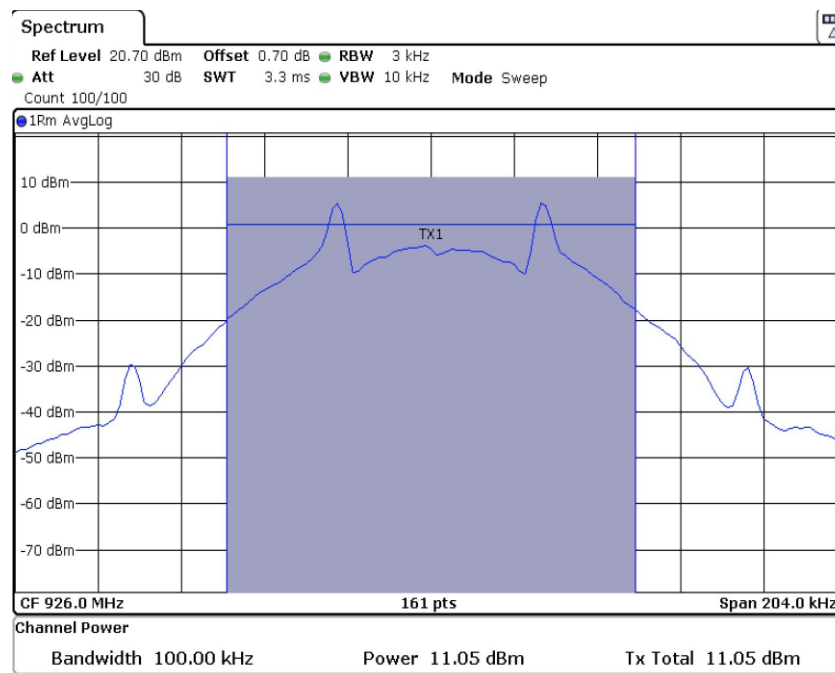


## TEST RESULTS (Cont.):

### Middle Channel



### Highest Channel



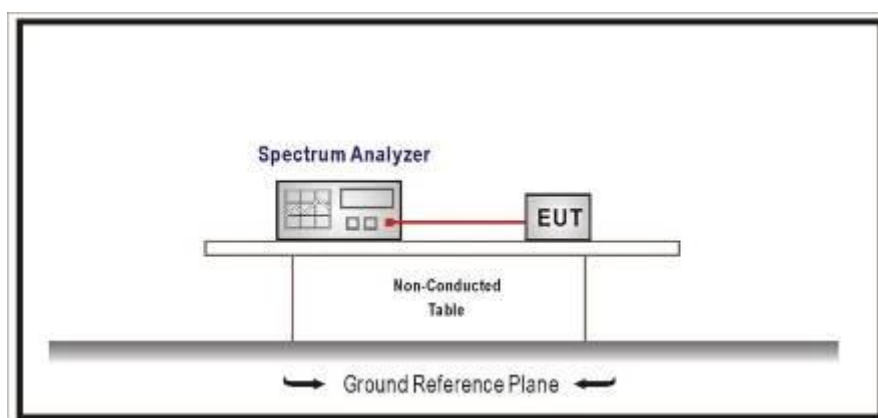
## TEST A.5: BAND-EDGE EMISSIONS COMPLIANCE (TRANSMITTER)

<b>LIMITS:</b>	Product standard:	Part 15 Subpart C §15.247 and RSS-247
	Test standard:	Part 15 Subpart C §15.247(d) and RSS-247 5.5

### LIMITS

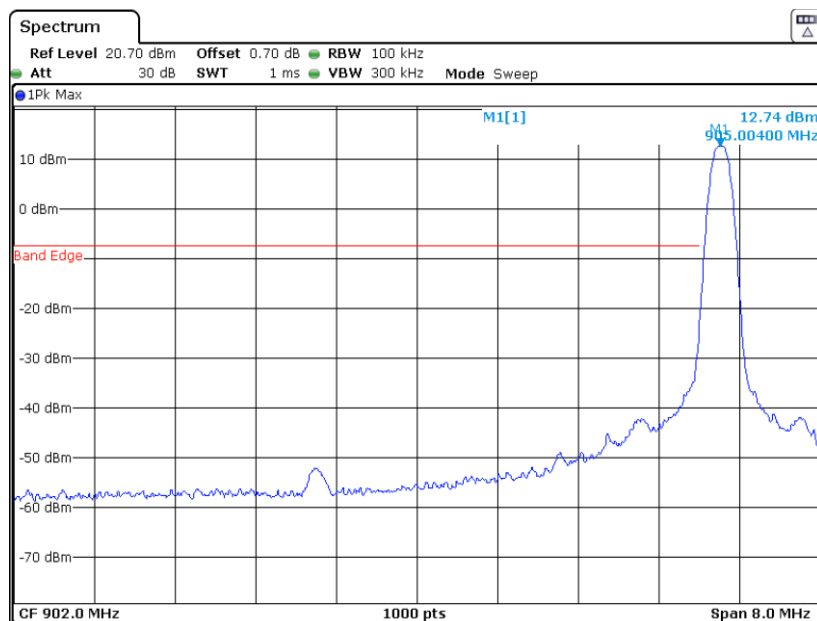
Emissions outside the frequency band in which the intentional radiator is operating shall be at least 20dB below the highest level of the desired power.

### **TEST SETUP:**

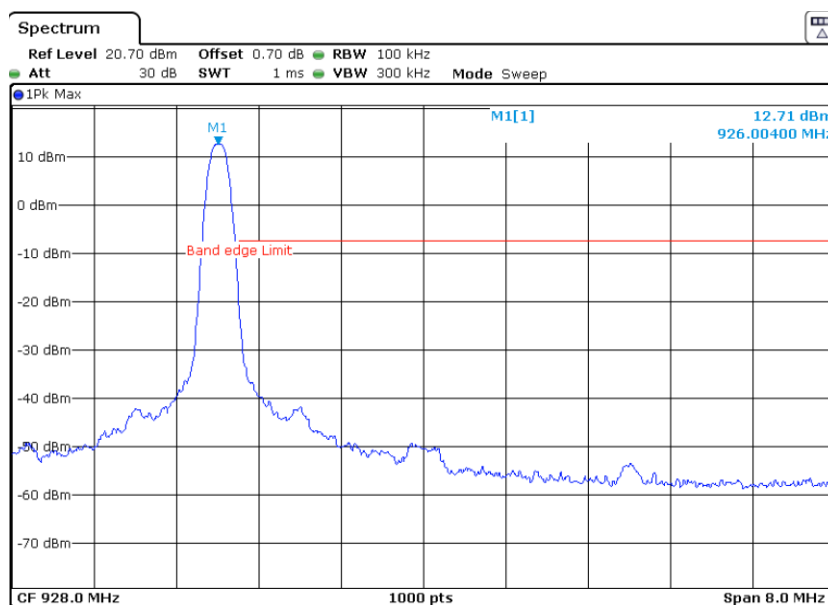


TESTED SAMPLES:	S/01
TESTED CONDITIONS MODES:	TC#01
TEST RESULTS:	PASS

### Lowest Frequency (HOP OFF)

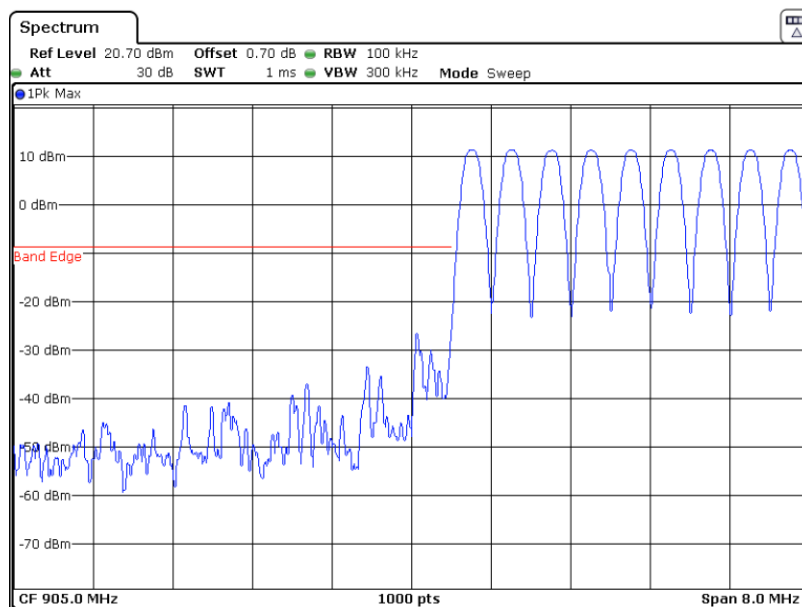


### Highest Frequency (HOP OFF)

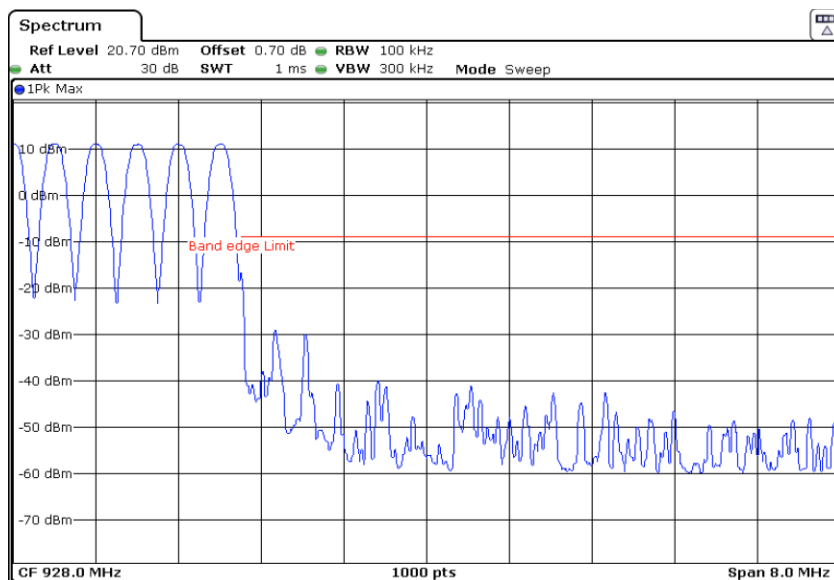


## TEST RESULTS (Cont.):

### Lowest Frequency (HOP ON)



### Highest Frequency (HOP ON)



Measurement Uncertainty

<+2.03

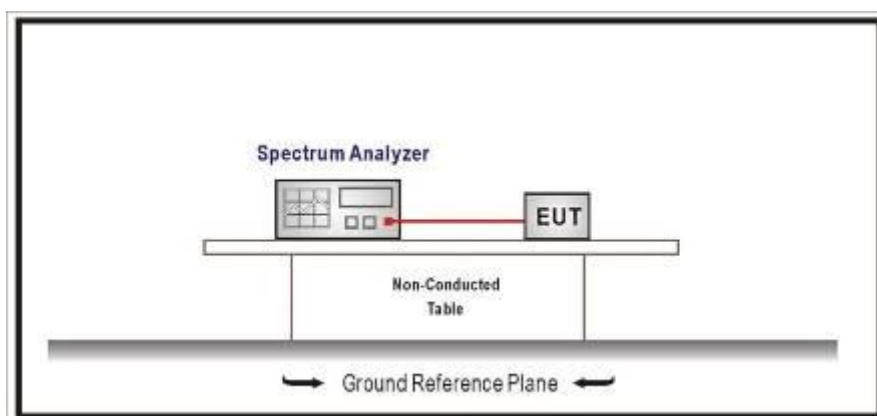
## TEST A.6: EMISSION LIMITATIONS CONDUCTED (TRANSMITTER)

<b>LIMITS:</b>	Product standard:	Part 15 Subpart C §15.247 and RSS-247
	Test standard:	Part 15 Subpart C §15.247(d) and RSS-247 5.5

### LIMITS

In any 100 kHz bandwidth outside the frequency band in which the digitally modulated 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. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, the attenuation required shall be 30 dB instead of 20 dB.

<b>TEST SETUP</b>	
-------------------	--



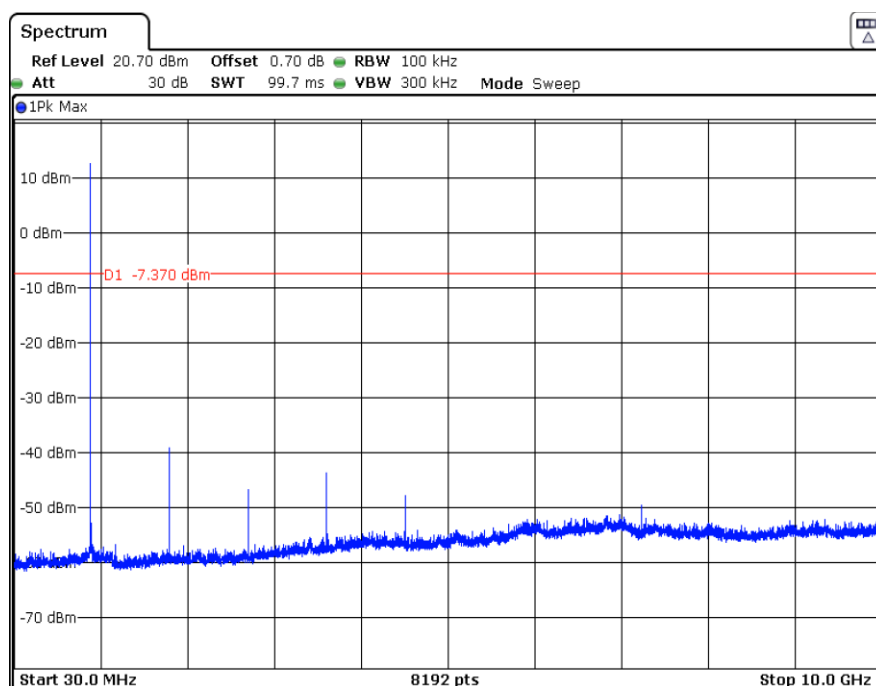
<b>TESTED SAMPLES:</b>	S/01
<b>TESTED CONDITIONS MODES:</b>	TC#01
<b>TEST RESULTS:</b>	PASS

	Lowest frequency 905 MHz	Middle frequency 915 MHz	Highest frequency 926 MHz
Reference Level Measurement (dBm)	12.63	12.61	12.59
Measurement uncertainty (dB)	<±0.78		

TEST RESULTS (Cont.):

**Lowest frequency: 905 MHz**

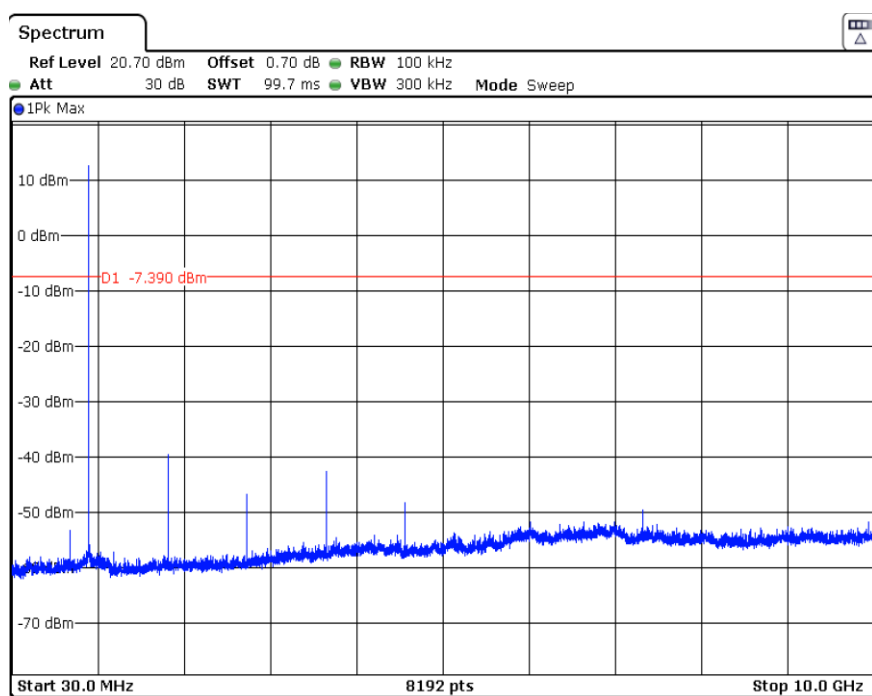
Frequency (GHz)	Emission limitations conducted (dBm)	Limit (dBm)
1.188	-56.58	-7.37
1.809	-39.11	-7.37
2.716	-46.67	-7.37
3.612	-43.64	-7.37
4.525	-47.68	-7.37



## TEST RESULTS (Cont.):

### Middle frequency: 915 MHz

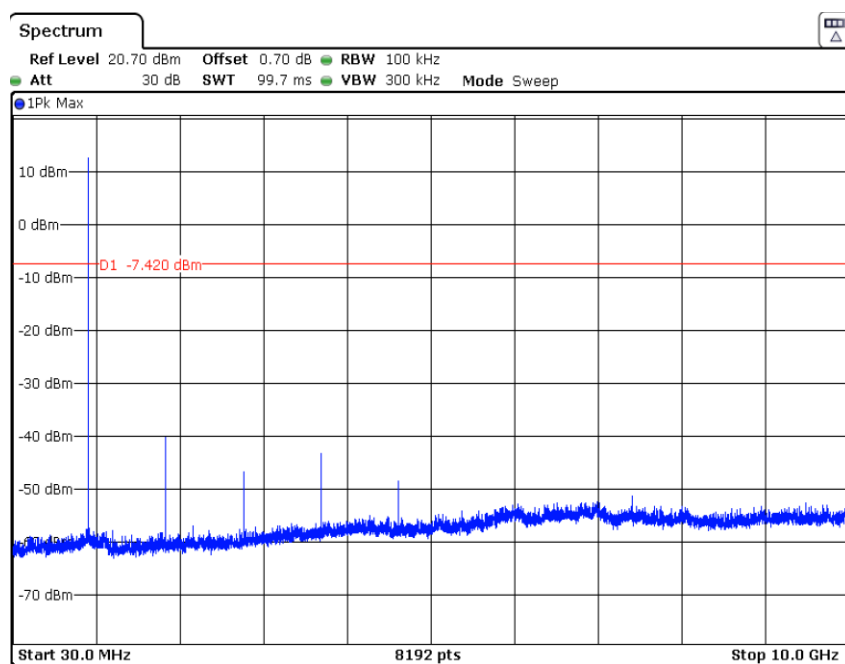
Frequency (GHz)	Emission limitations conducted (dBm)	Limit (dBm)
1.1830	-39.49	-7.39
2.746	-48.39	-7.39
3.66	-42.60	-7.39
4.575	-48.40	-7.39
7.312	-49.49	-7.39



## TEST RESULTS (Cont.):

### Highest frequency: 926 MHz

Frequency (GHz)	Emission limitations conducted (dBm)	Limit (dBm)
1.853	-40.15	-7.42
2.777	-46.56	-7.42
3.703	-42.50	-7.42
4.63	-48.38	-7.42



## TEST A.7: EMISSION LIMITATIONS RADIATED (TRANSMITTER)

<b>LIMITS:</b>	Product standard:	Part 15 Subpart C §15.247 and RSS-247
	Test standard:	Part 15 Subpart C §15.247(d) and RSS-247 5.5

### LIMITS

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) (see §15.205(c) / RSS-Gen):

Frequency Range (MHz)	Field strength (μV/m)	Field strength (dBμV/m)	Measurement distance (m)
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	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
960 - 25000	500	54	3

The emission limits shown in the above table are based on measurements employing CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

For average radiated emission measurements above 1000 MHz, there is also a limit corresponding to 20 dB above the indicated values in the table is specified when measuring with peak detector function.

RSS-247. Attenuation below the general field strength limits specified in RSS-Gen is not required

### **TEST SETUP:**

All radiated tests were performed in a semi-anechoic chamber. The measurement antenna is situated at 3 m for the frequency range 30-1000 MHz (Bilog antenna) and at a distance of 1m for the frequency range 1-40 GHz (1 GHz-18 GHz and 18 GHz-40 GHz Double ridge horn antennas).

For radiated emissions in the range 1-40 GHz that is performed at a distance closer than the specified distance, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

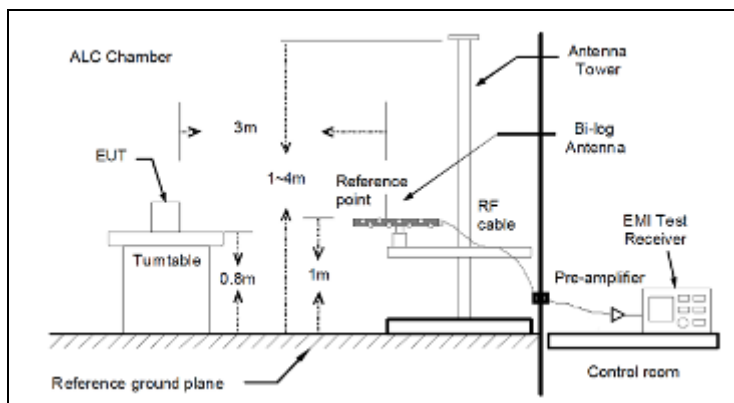
The equipment under test was set up on a non-conductive platform above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360° and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

Measurements were made in both horizontal and vertical planes of polarization.

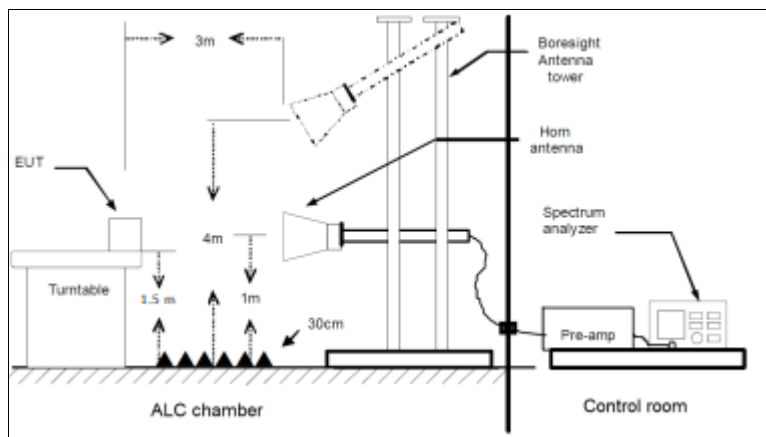
The field strength is calculated by adding correction factor to the measured level from the spectrum analyzer. This correction factor includes antenna factor, cable loss and pre-amplifiers gain.

## TEST SETUP (CONT.):

### Radiated measurements Setup $f < 1$ GHz



### Radiated measurements setup $f > 1$ GHz



#### TESTED SAMPLES:

S/02

#### TESTED CONDITIONS MODES:

TC#01

#### TEST RESULTS:

PASS

#### Frequency range 30 MHz – 1000 MHz

The spurious emissions for the lowest, middle and highest operating channels are showed in the tables of each frequency range.

#### Frequency range 1 GHz – 18 GHz

The spurious emissions for the lowest, middle and highest operating channels are showed in the tables of each frequency range.

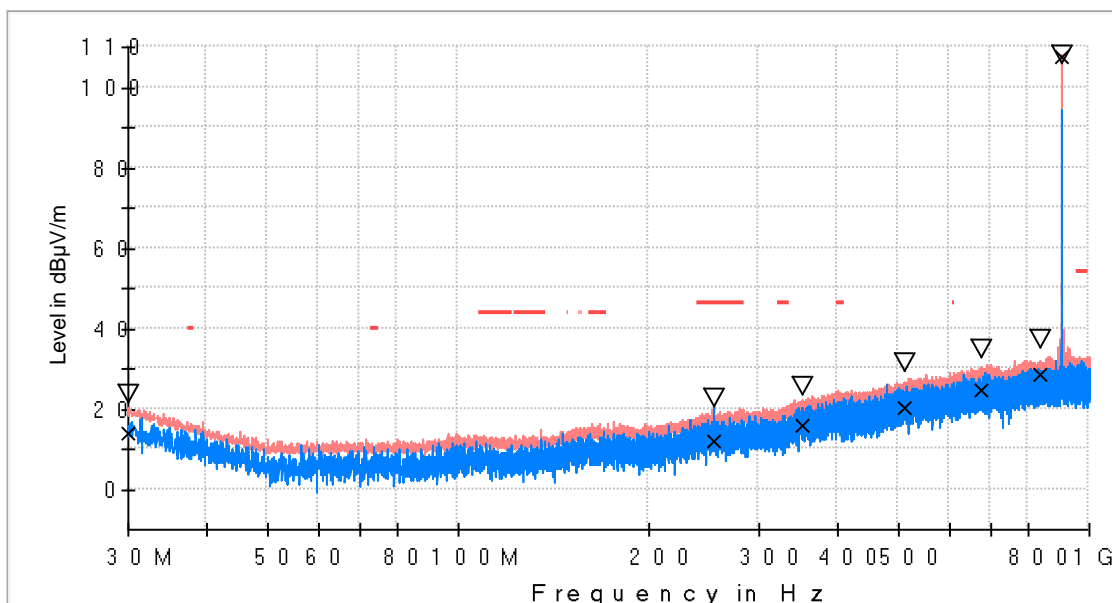
TEST RESULTS (Cont.):

30-1000 MHz (Lowest Channel)

Lowest Channel 905 MHZ:

30MHz\_1GHz\_HP & VP\_CH Low

R F \_ F C C \_ 1 5 . 2 4 7 \_ E F i e l d \_ 3 0 M H z \_ 1 G H z



- PK + \_ M A X H
- PK + \_ C L R W R
- - - TX limits to Spurious Emission FCC 15.247 (30 MHz to 1 GHz)
- ▽ M a x P e a k - P K + ( S i n g l e )
- x Q u a s i P e a k - Q P K ( S i n g l e )

Maximizations

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)
30.048500	23.71	13.81
254.215500	22.73	11.84
351.118500	25.77	15.67
508.064500	31.58	20.29
673.207000	34.85	24.42
833.014500	37.54	28.33
905.037000	107.88	107.75

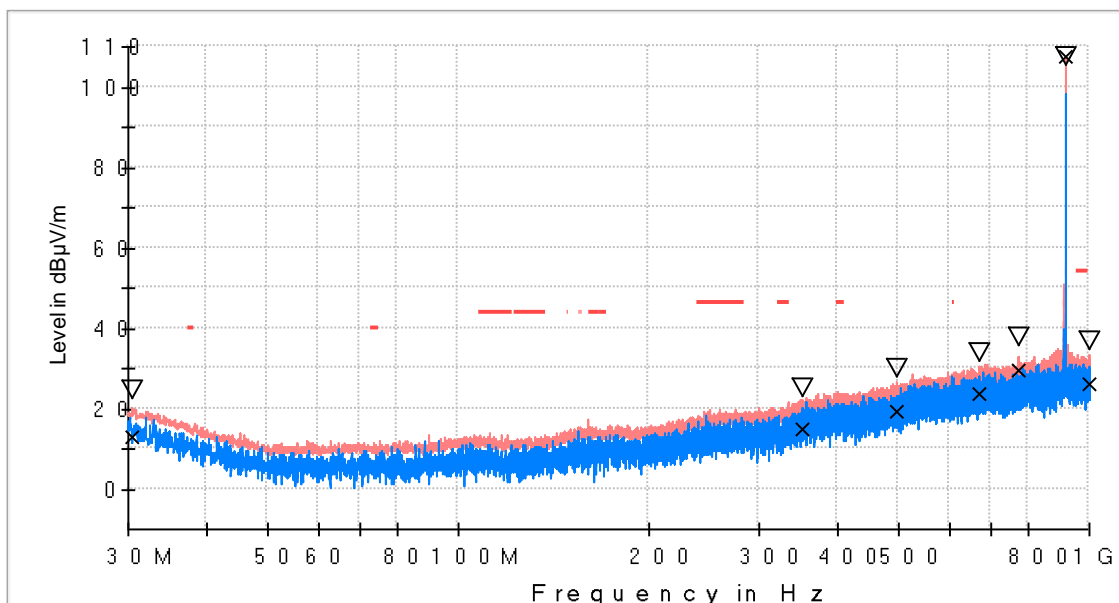
TEST RESULTS (Cont.):

30-1000 MHz (Middle Channel)

Middle Channel 915 MHz:

30MHz\_1GHz\_HP & VP\_CH Mid

R F \_ F C C \_ 1 5 . 2 4 7 \_ E F i e l d \_ 3 0 M H z \_ 1 G H z



- PK + \_ M A X H
- PK + \_ C L R W R
- - - TX limits to Spurious Emission FCC 15.247 (30 MHz to 1 GHz)
- ▽ MaxPeak-PK+ (Single)
- x QuasiPeak-QPK (Single)

Maximizations

Frequency (MHz)	MaxPeak (dBµV/m)	QuasiPeak (dBµV/m)
30.436500	24.47	13.00
351.700500	25.29	14.99
496.424500	29.85	19.05
669.230000	33.88	23.59
770.983000	37.73	29.44
915.028000	107.72	107.68
999.078500	36.98	26.12

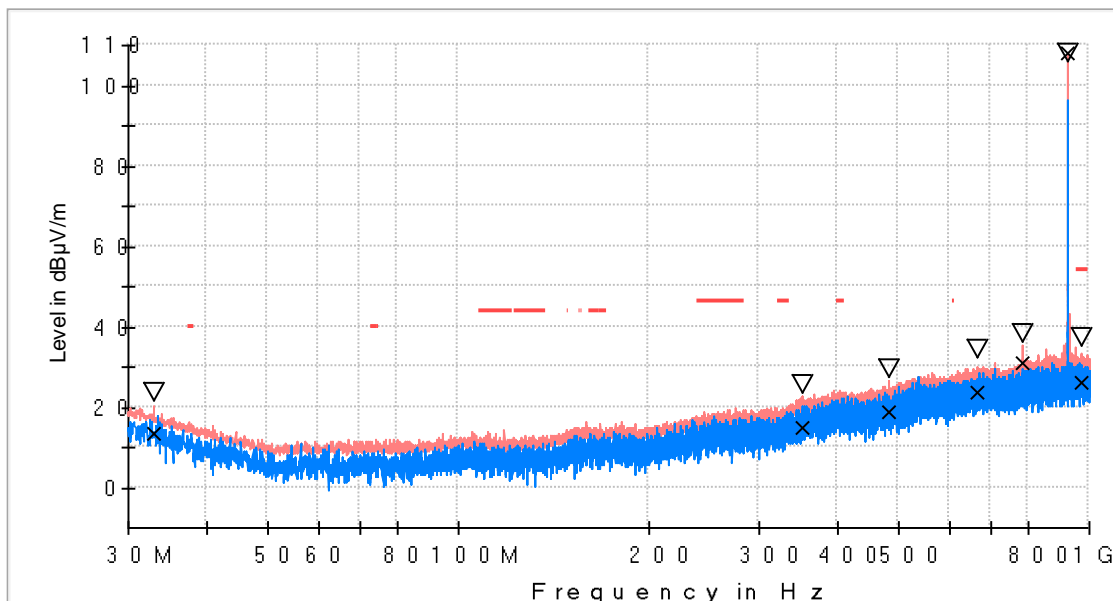
TEST RESULTS (Cont.):

30-1000 MHz (Highest Channel)

Highest Channel 926 MHz:

30MHz\_1GHz\_HP & VP\_CH High

R F \_ F C C \_ 1 5 . 2 4 7 \_ E F i e l d \_ 3 0 M H z \_ 1 G H z



Maximizations

Frequency (MHz)	MaxPeak (dBμV/m)	QuasiPeak (dBμV/m)
32.910000	23.44	13.32
351.943000	25.40	14.94
482.844500	29.29	18.54
666.029000	34.46	23.57
781.362000	38.21	31.15
926.037500	108.18	108.05
968.281000	37.20	25.94

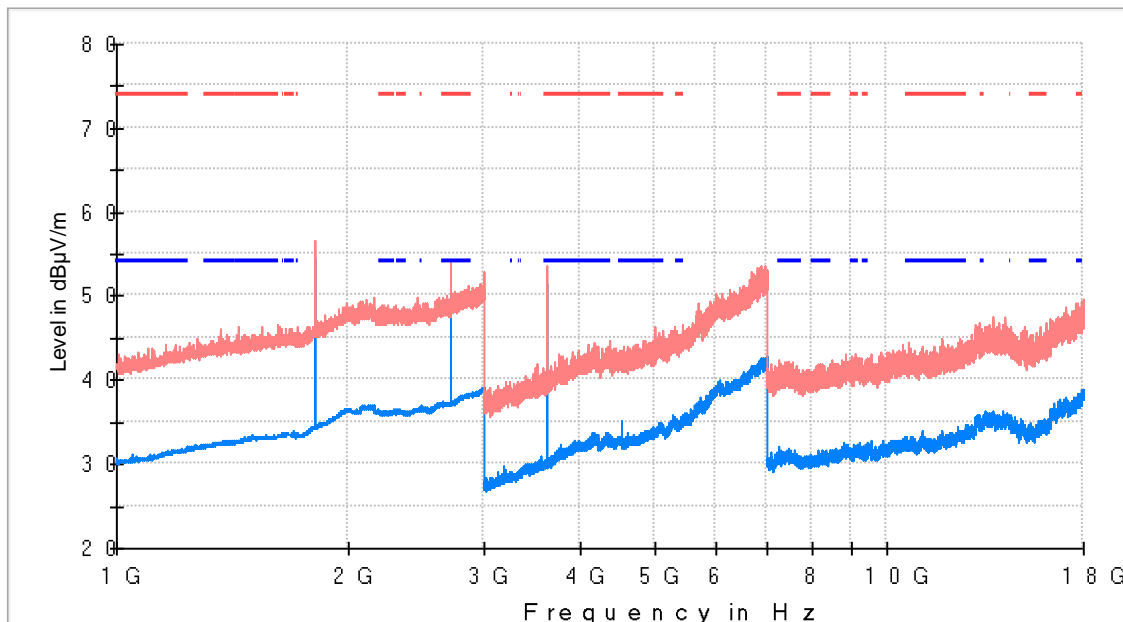
TEST RESULTS (Cont.):

1-18 GHz (Lowest Channel)

Lowest Channel 905 MHz:

1GHz\_18GHz\_ HP & VP\_CH Low

R F \_ F C C \_ 1 5 . 2 4 7 \_ E F i e l d \_ 1 G H z \_ 1 8 G H z



— AVG \_ M A X H  
— P K + \_ M A X H  
— T X l i m i t s t o S p u r i o u s E m i s s i o n F C C 1 5 . 2 4 7 ( 1 G H z t o 2 6 G H z )  
— T X l i m i t s t o S p u r i o u s E m i s s i o n F C C 1 5 . 2 4 7 ( 1 G H z t o 2 6 G H z )

Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Azimuth (deg)	Comment
1810.000000	56.61	54.65	H	-118.0	Fundamental
2715.000000	54.00	50.08	H	44.0	
3620.000000	52.92	51.51	H	82.0	
4525.000000	43.36	35.13	V	-179.0	

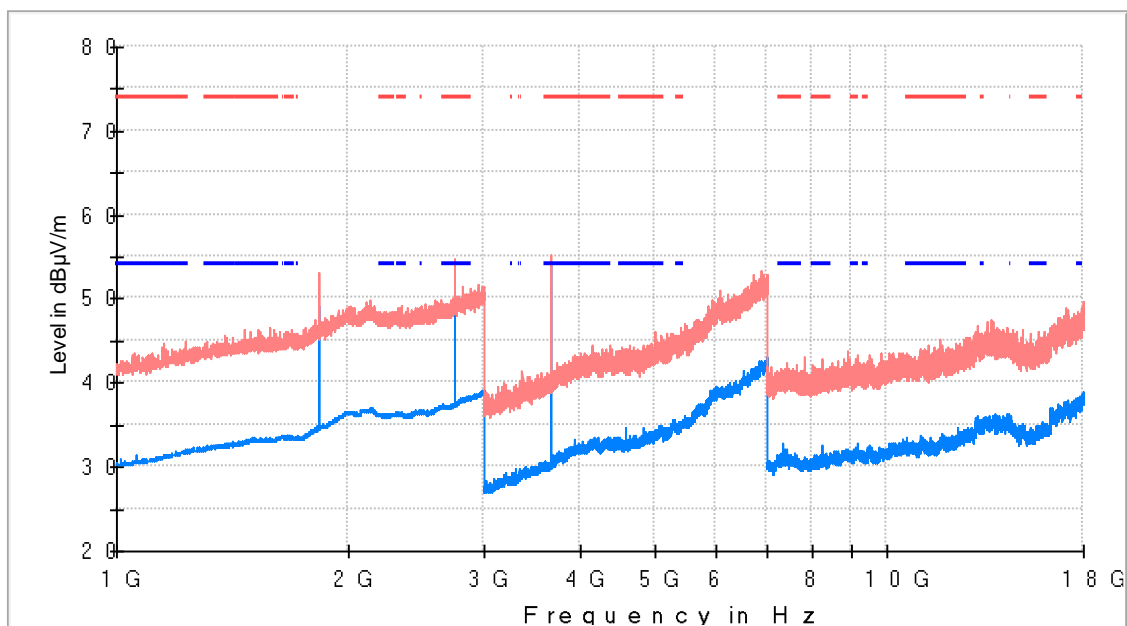
TEST RESULTS (Cont.):

1-18 GHz (Middle Channel)

Middle Channel 915 MHz:

1GHz\_18GHz\_HP & VP\_CH Mid

R F \_ F C C \_ 1 5 . 2 4 7 \_ E F i e l d \_ 1 G H z \_ 1 8 G H z



— AVG \_ M A X H

— P K + \_ M A X H

— T X l i m i t s t o S p u r i o u s E m i s s i o n F C C 1 5 . 2 4 7 ( 1 G H z t o 2 6 G H z

— T X l i m i t s t o S p u r i o u s E m i s s i o n F C C 1 5 . 2 4 7 ( 1 G H z t o 2 6 G H z

Maximizations

Frequency (MHz)	PK+_MAXH (dBµV/m)	AVG_MAXH (dBµV/m)	Pol	Azimuth (deg)	Comment
1830.000000	53.10	49.10	V	172.0	Fundamental
2745.000000	54.80	50.39	H	63.0	
3660.000000	55.25	54.06	V	180.0	
4574.500000	44.08	34.67	H	73.0	
5450.000000	44.81	36.19	H	-119.0	

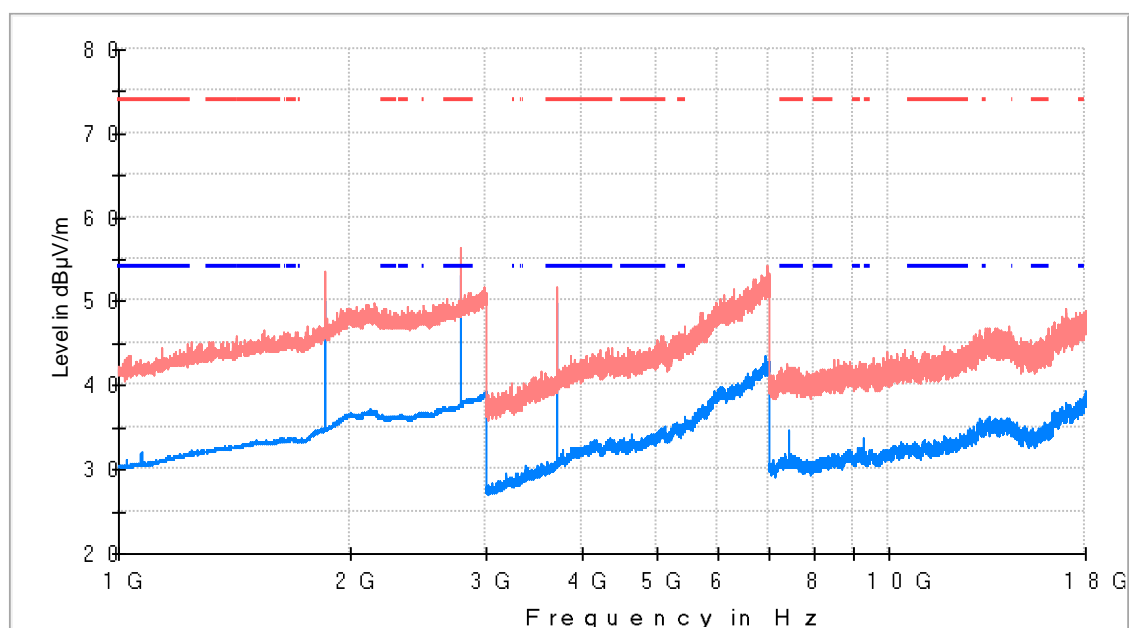
TEST RESULTS (Cont.):

1-18 GHz (Highest Channel)

Highest Channel 926 MHz:

1GHz\_18GHz\_HP & VP\_CH High

R F \_ F C C \_ 1 5 . 2 4 7 \_ E F i e l d \_ 1 G H z \_ 1 8 G H z



— AVG\_MAXH  
 — PK+\_MAXH  
 — TX limits to Spurious Emission FCC15.247 (1 GHz to 26 GHz)  
 — TX limits to Spurious Emission FCC15.247 (1 GHz to 26 GHz)

Maximizations

Frequency (MHz)	PK+_MAXH (dBμV/m)	AVG_MAXH (dBμV/m)	Pol	Azimuth (deg)	Comment
1852.000000	53.66	50.19	V	-113.0	Fundamental
2778.000000	56.32	53.24	H	50.0	
3703.500000	51.54	49.78	V	-179.0	
7408.000000	41.40	34.71	V	55.0	
9260.000000	40.97	33.84	V	-172.0	