FCC Test Report

Product Name	LeanOrder detectionShelf
Model No.	01，02
FCC ID.	2ANAA-LODSHELF01

Applicant	Intellion AG
Address	Schuppisstrasse 10, 9016 St. Gallen, Switzerland

Date of Receipt	Aug 09, 2017
Issued Date	Apr. 23, 2018
Report No.	1780164R-RFUSP15V00
Report Version	V1.0

Testing Laboratory
3023

Test Report

Issued Date: Apr. 23, 2018
Report No. : 1780164R-RFUSP15V00

Product Name	LeanOrder detectionShelf
Applicant	Intellion AG
Address	Schuppisstrasse 10, 9016 St. Gallen, Switzerland
Manufacturer	Identec Solutions AG
Model No.	01，02
FCC ID.	2ANAA-LODSHELF01
EUT Rated Voltage	DC 9V
EUT Test Voltage	DC 9V
Trade Name	Intellion
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2017 ANSI C63.4: 2014, ANSI C63.10: 2013
Test Result	Complied

Documented By : April Chen

(Adm. Specialist / April Chen)

Tested By : Boris HSU

(Engineer / Boris Hsu)

Approved By :

(Manager / Vincent Lin)

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1. GENERAL INFORMATION

1.1. EUT Description

Product Name	LeanOrder detectionShelf
Trade Name	Intellion
FCC ID.	2ANAA-LODSHELF01
Model No.	01，02
Frequency Range	903-927MHz
Type of Modulation	GFSK
Number of Channels	3
Channel Control	Auto
Antenna Type	Integrated Antenna

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	IB-Lenhardt AG	N/A	Integrated	2.85 dBi for 920MHz

Center Frequency of Each Channel:

Channel	Frequency
Channel 1:	903MHz
Channel 2:	920MHz
Channel 3:	927MHz

Note:

1. The EUT is an LeanOrder detectionShelf with a built-in 903-927MHz GFSK transceiver.
2. The EUT is including two type for different dimension.
3. These tests are conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.249.
4. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
5. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.

Test Mode	Mode 1: Transmit(130x80) Mode 2: Transmit(100x60)

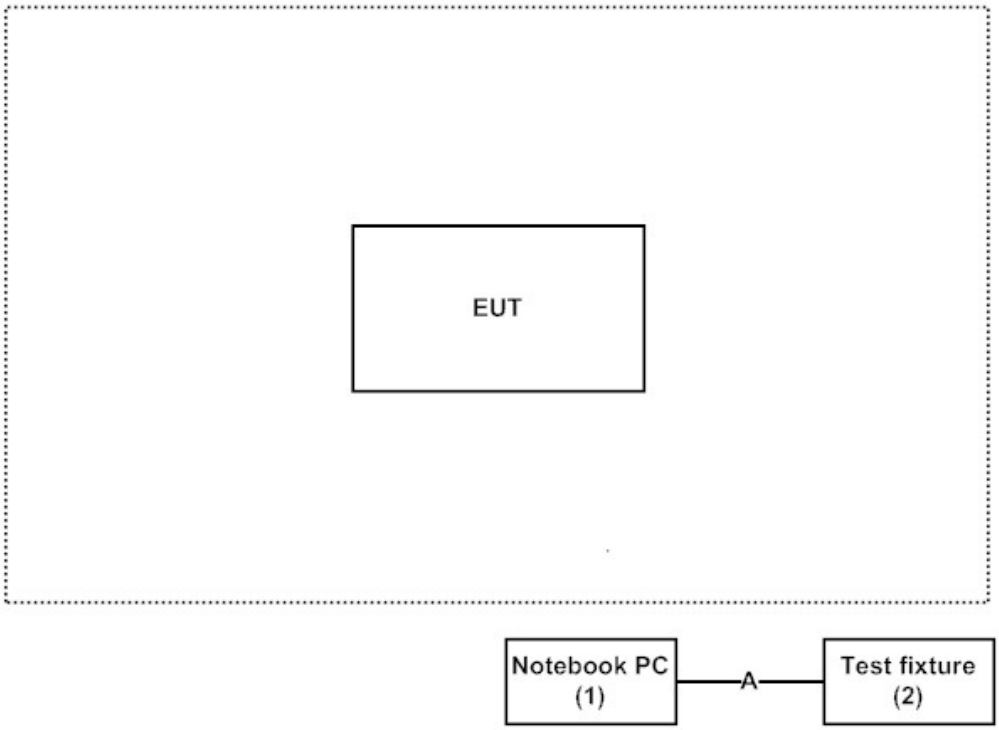
1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1.	Notebook PC	DELL	Latitude E5440	B6TYTZ1	Non-Shielded, 0.8m
2	Test fixture	N/A	N/A	N/A	N/A

Signal Cable Type		Signal cable Description
A.	LAN Cable	Non-shielded, 4.7m

1.4. Configuration of Test System



1.5. EUT Exercise Software

(1) Setup the EUT as shown on 1.4

(2) Execute software " Gen 3 Tag Certification v1.0.0.23480" on the notebook PC, Wireless control the EUT.

(3) Configure the test mode, the test channel, and the data rate.

(4) Start the continuous transmission.

(5) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd. Web Site:
http://www.dekra.com.tw/english/about/certificates.aspx?bval=5
The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: http://www.dekra.com.tw/index_en.aspx

Site Description: Accredited by TAF
Accredited Number: 3023

Site Name: DEKRA Testing and Certification Co., Ltd
Site Address: No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : info.tw@dekra.com

FCC Accreditation Number: TW3023

1.7. List of Test Equipment

For Conducted measurements /CB3/SR8

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Date	Due. Date
	Temperature Chamber	WIT GROUP	TH-1S-B	EQ-201-00146	2018/2/12	2019/2/11
X	Spectrum Analyzer	Agilent	N9010A	MY48030495	2017/10/13	2018/10/12
X	Power Meter	Anritsu	ML2495A	6K00003357	2017/8/7	2018/8/6
X	Pulse power sensor	Anritsu	MA2411B	0846193	2017/8/7	2018/8/6
X	EMI Test Receiver	R&S	ESCS 30	100369	2017/11/7	2018/11/6
X	LISN	R&S	ESH3-Z5	836679/017	2018/2/9	2019/2/8
X	LISN	R&S	ENV216	100097	2018/2/9	2019/2/8
X	Coaxial Cable	DEKRA	RG 400	LC018-RG	2017/6/22	2018/6/21

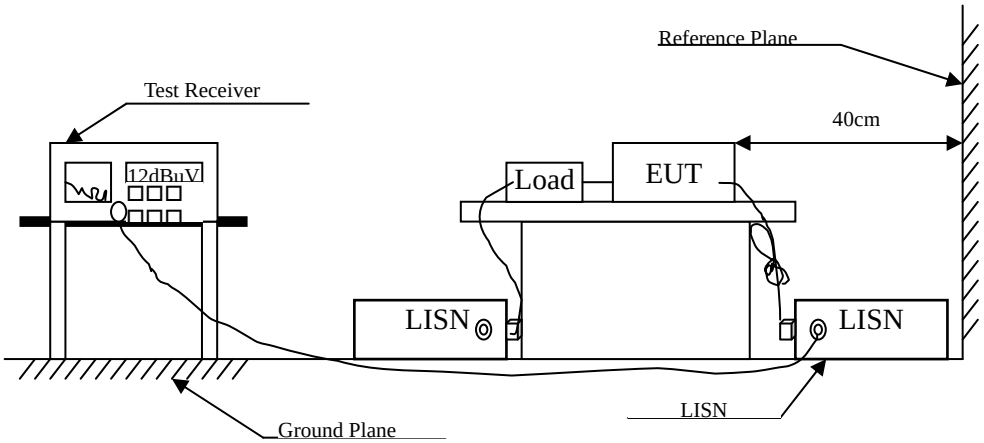
For Radiated measurements /Site3/CB8

	Equipment	Manufacturer	Model No.	Serial No.	Cali. Date	Due. Date
X	Spectrum Analyzer	R&S	FSP40	100170	2018/3/12	2019/3/11
X	Loop Antenna	Teseq	HLA6121	37133	2017/10/13	2018/10/12
X	Bilog Antenna	Schaffner Chase	CBL6112B	2707	2017/06/25	2018/06/24
X	Coaxial Cable	DEKRA	RG 214	LC003-RG	2017/06/15	2018/06/14
X	Pre-Amplifier	Jet-Power	JPA-10M1G33	170101000330010	2017/07/19	2018/07/18
X	Horn Antenna	ETS-Lindgren	3117	00135205	2017/04/28	2018/04/27
X	Pre-Amplifier	EMCI	EMC012630SE	980210	2017/02/24	2018/02/23
X	Coaxial Cable	QuieTek	SF-106	LC035/37/41-SF	2017/6/21	2018/6/20
X	Horn Antenna	ETS-Lindgren	3117	00135205	2017/04/28	2018/04/27
X	Pre-Amplifier	EMCI	EMC012630SE	980210	2017/02/24	2018/02/23
	Amplifier + Cable	EMCI	EMC184045SE	980370	2018/03/21	2019/03/20
	Horn Antenna	Com-Power	AH-840	101043	2018/01/09	2019/01/08
X	Filter	MicroTRON	BRM50701	019	2017/11/21	2018/11/20
X	Filter	Microwave Circuits	N0257881	36681	2018/1/22	2019/1/21

Note:
1. All equipments are calibrated every one year.
2. The test instruments marked with “X” are used to measure the final test results.
3. Test Software version :QuieTek EMI 2.0 V2.1.113.

2. Conducted Emission

2.1. Test Setup



2.2. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit		
Frequency MHz	Limits	
	QP	AV
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges.

2.3. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)
Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement.
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.4. Uncertainty

± 2.26 dB

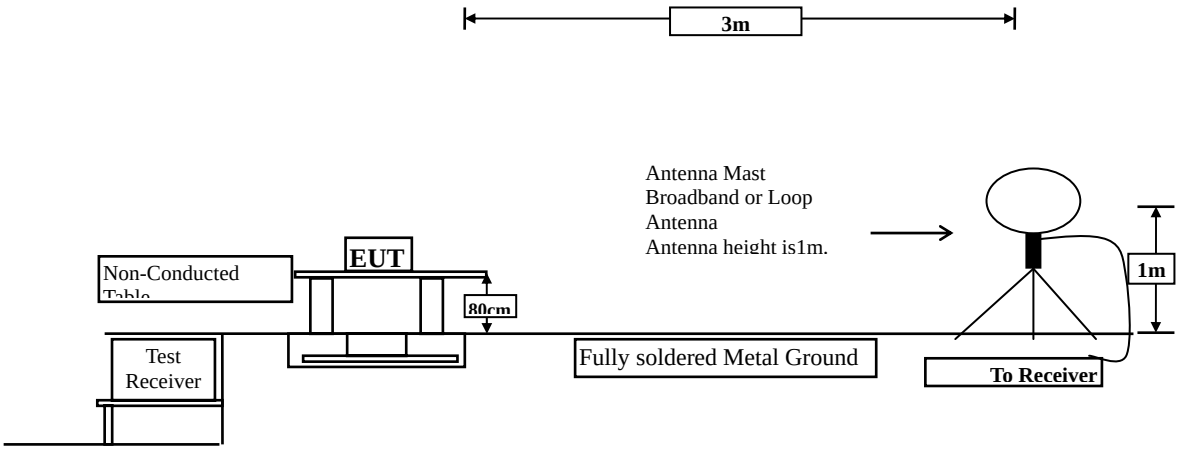
2.5. Test Result of Conducted Emission

Owing to the DC operation of EUT, this test item is not performed.

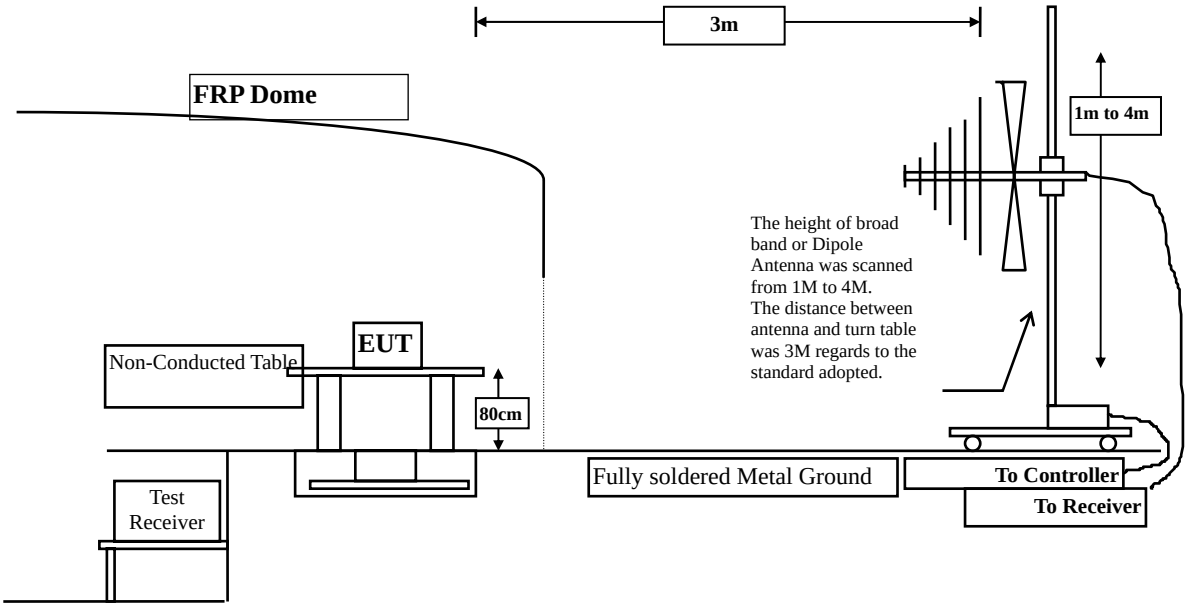
3. Radiated Emission

3.1. Test Setup

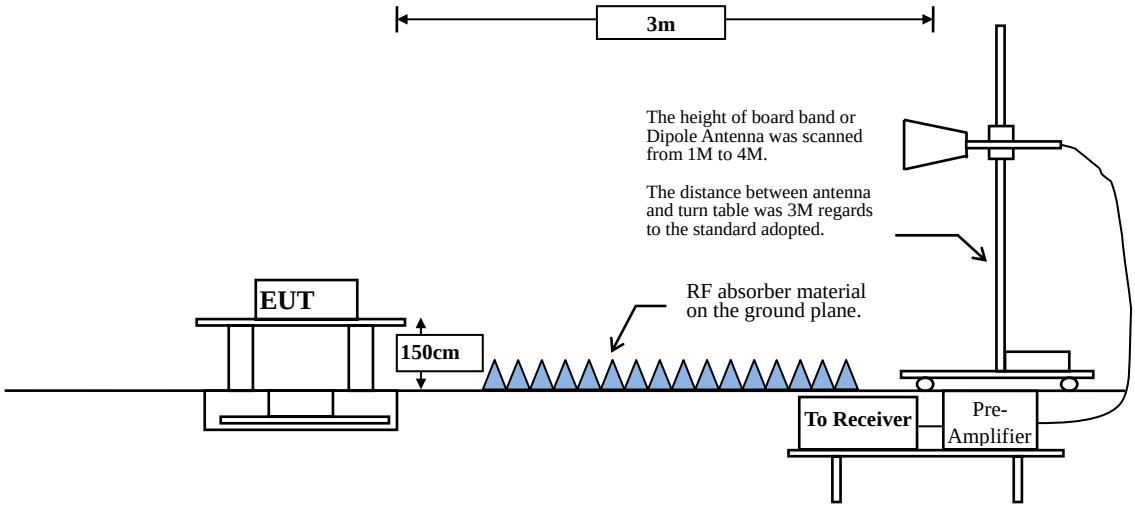
Under 30MHz



Below 1GHz



Above 1GHz


3m
The height of board band or Dipole Antenna was scanned from 1M to 4M.
The distance between antenna and turn table was 3M regards to the standard adopted.
EUT
150cm
RF absorber material on the ground plane.
To Receiver
Pre-Amplifier

3.2. Limits

➢ **Fundamental and Harmonics Emission Limits**

FCC Part 15 Subpart C Paragraph 15.249 Limits				
Frequency MHz	Field Strength of Fundamental		Field Strength of Harmonics	
	(mV/m @3m)	(dBuV/m @3m)	(uV/m @3m)	(dBuV/m @3m)
902-928	50	94	500	54
2400-2483.5	50	94	500	54
5725-5875	50	94	500	54

Remarks : 1. RF Voltage (dBuV/m) = 20 log RF Voltage (uV/m)
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

➢ **General Radiated Emission Limits**

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	Field strength (microvolts/meter)	Measurement distance (meter)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Remarks : 1. RF Voltage (dBuV/m) = 20 log RF Voltage (uV/m)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

3.3. Test Procedure

The EUT was setup according to ANSI C63.10, 2013 and tested compliance to FCC 47CFR 15.249 requirements.

Measuring the frequency range below 1GHz, the EUT is placed on a turn table which is 0.8 meter above ground,when measuring the frequency range above 1GHz, the EUT is placed on a turn table which is 1.5 meter above ground.

The turn table is rotated 360 degrees to determine the position of the maximum emission level.

The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10: 2013 on radiated measurement.

The resolution bandwidth below 30MHz setting on the field strength meter is 9kHz and 30MHz~1GHz is 120kHz and above 1GHz is 1MHz.

Radiated emission measurements below 30MHz are made using Loop Antenna and 30MHz~1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The measurement frequency range form 9kHz - 10th Harmonic of fundamental was investigated.

3.4. Uncertainty

± 4.08 dB above 1GHz

± 4.22 dB below 1GHz

3.5. Test Result of Radiated Emission

Product : LeanOrder detectionShelf
Test Item : Fundamental Radiated Emission
Test Site : No.3OATS
Test Date : 2018/04/21
Test Mode : Mode 1: Transmit(130x80) (X-asix)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
903.000	6.002	76.630	82.632	-11.368	94.000
920.000	6.307	71.730	78.037	-15.963	94.000
927.000	6.451	71.070	77.521	-16.479	94.000
Vertical					
903.000	6.002	78.340	84.342	-9.658	94.000
920.000	6.307	79.530	85.837	-8.163	94.000
927.000	6.451	78.020	84.471	-9.529	94.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna Factor + Cable Loss – PreAMP.

Product : LeanOrder detectionShelf
Test Item : Fundamental Radiated Emission
Test Site : No.3OATS
Test Date : 2018/04/21
Test Mode : Mode 1: Transmit(130x80) (Y-asix)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
903.000	6.002	84.540	90.542	-3.458	94.000
920.000	6.307	78.920	85.227	-8.773	94.000
927.000	6.451	77.840	84.291	-9.709	94.000
Vertical					
903.000	6.002	75.350	81.352	-12.648	94.000
920.000	6.307	71.330	77.637	-16.363	94.000
927.000	6.451	70.070	76.521	-17.479	94.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna Factor + Cable Loss – PreAMP.

Product : LeanOrder detectionShelf
Test Item : Fundamental Radiated Emission
Test Site : No.3OATS
Test Date : 2018/04/21
Test Mode : Mode 1: Transmit(130x80) (Z-asix)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
903.000	6.002	76.430	82.432	-11.568	94.000
920.000	6.307	69.720	76.027	-17.973	94.000
927.000	6.451	67.030	73.481	-20.519	94.000
Vertical					
903.000	6.002	81.750	87.752	-6.248	94.000
920.000	6.307	77.060	83.367	-10.633	94.000
927.000	6.451	75.930	82.381	-11.619	94.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Measurement Level = Reading Level + Correct Factor.
3. Correct Factor = Antenna Factor + Cable Loss – PreAMP.

Product : LeanOrder detectionShelf
Test Item : Fundamental Radiated Emission
Test Site : No.3OATS
Test Date : 2018/04/21
Test Mode : Mode 2: Transmit(100x60) (X-asix)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
903.000	6.002	79.210	85.212	-8.788	94.000
920.000	6.307	80.890	87.197	-6.803	94.000
927.000	6.451	74.780	81.231	-12.769	94.000
Vertical					
903.000	6.002	84.710	90.712	-3.288	94.000
920.000	6.307	85.390	91.697	-2.303	94.000
927.000	6.451	79.470	85.921	-8.079	94.000

Note:

4. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
5. Measurement Level = Reading Level + Correct Factor.
6. Correct Factor = Antenna Factor + Cable Loss – PreAMP.

Product : LeanOrder detectionShelf
Test Item : Fundamental Radiated Emission
Test Site : No.3OATS
Test Date : 2018/04/21
Test Mode : Mode 2: Transmit(100x60) (Y-asix)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
903.000	6.002	87.030	93.032	-0.968	94.000
920.000	6.307	86.540	92.847	-1.153	94.000
927.000	6.451	81.090	87.541	-6.459	94.000
Vertical					
903.000	6.002	76.160	82.162	-11.838	94.000
920.000	6.307	78.910	85.217	-8.783	94.000
927.000	6.451	72.560	79.011	-14.989	94.000

Note:

4. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
5. Measurement Level = Reading Level + Correct Factor.
6. Correct Factor = Antenna Factor + Cable Loss – PreAMP.

Product : LeanOrder detectionShelf
Test Item : Fundamental Radiated Emission
Test Site : No.3OATS
Test Date : 2018/04/21
Test Mode : Mode 2: Transmit(100x60) (Z-asix)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
903.000	6.002	77.030	83.032	-10.968	94.000
920.000	6.307	75.380	81.687	-12.313	94.000
927.000	6.451	70.740	77.191	-16.809	94.000
Vertical					
903.000	6.002	82.560	88.562	-5.438	94.000
920.000	6.307	82.270	88.577	-5.423	94.000
927.000	6.451	76.430	82.881	-11.119	94.000

Note:

4. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
5. Measurement Level = Reading Level + Correct Factor.
   Correct Factor = Antenna Factor + Cable Loss – PreAMP.

Product : LeanOrder detectionShelf
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/18
Test Mode : Mode 1: Transmit(130x80) (903MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
1806.000	-15.186	57.336	42.151	-31.849	74.000
2709.000	-11.952	50.398	38.446	-35.554	74.000
3612.000	-11.544	50.396	38.853	-35.147	74.000
4515.000	-11.130	49.549	38.419	-35.581	74.000
5418.000	-9.693	55.632	45.939	-28.061	74.000
6321.000	-7.580	47.119	39.539	-34.461	74.000
7224.000	-4.789	48.974	44.185	-29.815	74.000
8127.000	-1.913	46.042	44.129	-29.871	74.000
9030.000	-2.537	46.808	44.271	-29.729	74.000

Average Detector:

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Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : LeanOrder detectionShelf
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/18
Test Mode : Mode 1: Transmit(130x80) (903MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
1806.000	-13.238	55.259	42.022	-31.978	74.000
2709.000	-12.094	54.636	42.542	-31.458	74.000
3612.000	-10.910	48.408	37.498	-36.502	74.000
4515.000	-7.779	49.619	41.840	-32.160	74.000
5418.000	-7.737	52.999	45.262	-28.738	74.000
6321.000	-6.096	47.185	41.089	-32.911	74.000
7224.000	-3.934	46.832	42.898	-31.102	74.000
8127.000	-0.662	46.888	46.226	-27.774	74.000
9030.000	-2.336	47.134	44.798	-29.202	74.000

Average Detector:

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Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : LeanOrder detectionShelf
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/18
Test Mode : Mode 1: Transmit(130x80) (920MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
1840.000	-15.039	67.272	52.233	-21.767	74.000
2760.000	-11.600	50.944	39.345	-34.655	74.000
3680.000	-12.388	50.944	38.556	-35.444	74.000
4600.000	-11.239	48.569	37.330	-36.670	74.000
5520.000	-8.811	54.753	45.941	-28.059	74.000
6440.000	-6.525	48.100	41.575	-32.425	74.000
7360.000	-3.868	46.687	42.819	-31.181	74.000
8280.000	0.138	46.103	46.241	-27.759	74.000
9200.000	-2.338	46.065	43.727	-30.273	74.000

Average Detector:

--

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
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Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/18
Test Mode : Mode 1: Transmit(130x80) (920MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
1840.000	-13.650	62.645	48.994	-25.006	74.000
2760.000	-11.777	52.144	40.368	-33.632	74.000
3680.000	-11.313	50.708	39.395	-34.605	74.000
4600.000	-7.420	48.134	40.714	-33.286	74.000
5520.000	-7.346	50.948	43.602	-30.398	74.000
6440.000	-5.212	48.039	42.827	-31.173	74.000
7360.000	-2.842	48.743	45.901	-28.099	74.000
8280.000	-0.003	47.686	47.683	-26.317	74.000
9200.000	-2.526	47.006	44.480	-29.520	74.000

Average Detector:

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Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : LeanOrder detectionShelf
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/18
Test Mode : Mode 1: Transmit(130x80) (927MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
1854.000	-14.978	66.469	51.490	-22.510	74.000
2781.000	-11.454	53.113	41.658	-32.342	74.000
3708.000	-12.558	48.889	36.331	-37.669	74.000
4635.000	-11.080	49.077	37.997	-36.003	74.000
5562.000	-9.159	50.381	41.222	-32.778	74.000
6489.000	-6.432	46.196	39.764	-34.236	74.000
7416.000	-3.780	48.261	44.481	-29.519	74.000
8343.000	0.208	46.369	46.577	-27.423	74.000
9270.000	-2.833	45.781	42.948	-31.052	74.000

Average Detector:

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Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : LeanOrder detectionShelf
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/18
Test Mode : Mode 1: Transmit(130x80) (927MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
1854.000	-13.823	63.321	49.498	-24.502	74.000
2781.000	-11.646	54.314	42.668	-31.332	74.000
3708.000	-11.366	51.881	40.516	-33.484	74.000
4635.000	-7.217	48.903	41.686	-32.314	74.000
5562.000	-7.621	48.769	41.147	-32.853	74.000
6489.000	-5.303	46.273	40.970	-33.030	74.000
7416.000	-2.728	46.358	43.630	-30.370	74.000
8343.000	0.134	45.785	45.919	-28.081	74.000
9270.000	-2.700	44.745	42.045	-31.955	74.000

Average Detector:

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Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : LeanOrder detectionShelf
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/18
Test Mode : Mode 2: Transmit(100x60) (903MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
1806.000	-15.186	61.800	46.615	-27.385	74.000
2709.000	-11.952	50.811	38.859	-35.141	74.000
3612.000	-11.544	50.666	39.123	-34.877	74.000
4515.000	-11.130	47.362	36.232	-37.768	74.000
5418.000	-9.693	55.096	45.403	-28.597	74.000
6321.000	-7.580	46.576	38.996	-35.004	74.000
7224.000	-4.789	47.925	43.136	-30.864	74.000
8127.000	-1.913	46.492	44.579	-29.421	74.000
9030.000	-2.537	46.795	44.258	-29.742	74.000

Average Detector:

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Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : LeanOrder detectionShelf
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/18
Test Mode : Mode 2: Transmit(100x60) (903MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
1806.000	-13.238	60.510	47.273	-26.727	74.000
2709.000	-12.094	58.382	46.288	-27.712	74.000
3612.000	-10.910	49.737	38.827	-35.173	74.000
4515.000	-7.779	48.607	40.828	-33.172	74.000
5418.000	-7.737	52.766	45.029	-28.971	74.000
6321.000	-6.096	47.458	41.362	-32.638	74.000
7224.000	-4.789	47.088	42.299	-31.701	74.000
8127.000	-1.913	46.498	44.585	-29.415	74.000
9030.000	-2.537	47.382	44.845	-29.155	74.000

Average Detector:

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Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : LeanOrder detectionShelf
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/18
Test Mode : Mode 2: Transmit(100x60) (920MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
1840.000	-15.039	65.834	50.795	-23.205	74.000
2760.000	-11.600	55.057	43.458	-30.542	74.000
3680.000	-12.388	51.998	39.610	-34.390	74.000
4600.000	-11.239	48.311	37.072	-36.928	74.000
5520.000	-8.811	54.044	45.232	-28.768	74.000
6440.000	-6.525	48.473	41.948	-32.052	74.000
7360.000	-3.868	47.915	44.047	-29.953	74.000
8280.000	0.138	47.341	47.479	-26.521	74.000
9200.000	-2.338	46.484	44.146	-29.854	74.000

Average Detector:

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Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : LeanOrder detectionShelf
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/18
Test Mode : Mode 2: Transmit(100x60) (920MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
1840.000	-13.650	60.813	47.162	-26.838	74.000
2760.000	-11.777	53.010	41.234	-32.766	74.000
3680.000	-11.313	50.695	39.382	-34.618	74.000
4600.000	-7.420	48.399	40.979	-33.021	74.000
5520.000	-7.346	51.234	43.888	-30.112	74.000
6440.000	-5.212	47.597	42.385	-31.615	74.000
7360.000	-2.842	46.868	44.026	-29.974	74.000
8280.000	-0.003	47.393	47.390	-26.610	74.000
9200.000	-2.526	48.336	45.810	-28.190	74.000

Average Detector:

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Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : LeanOrder detectionShelf
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/18
Test Mode : Mode 2: Transmit(100x60) (927MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
Peak Detector:					
1854.000	-14.978	68.412	53.433	-20.567	74.000
2781.000	-11.454	53.330	41.875	-32.125	74.000
3708.000	-12.558	49.070	36.512	-37.488	74.000
4635.000	-11.080	48.183	37.103	-36.897	74.000
5562.000	-9.159	52.687	43.528	-30.472	74.000
6489.000	-6.432	46.445	40.013	-33.987	74.000
7416.000	-3.780	47.818	44.038	-29.962	74.000
8343.000	0.208	46.561	46.769	-27.231	74.000
9270.000	-2.833	45.525	42.692	-31.308	74.000

Average Detector:

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Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : LeanOrder detectionShelf
Test Item : Harmonic Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/18
Test Mode : Mode 2: Transmit(100x60) (927MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Vertical					
Peak Detector:					
1854.000	-13.823	64.278	50.455	-23.545	74.000
2781.000	-11.646	53.394	41.748	-32.252	74.000
3708.000	-11.366	49.482	38.117	-35.883	74.000
4635.000	-7.217	47.874	40.657	-33.343	74.000
5562.000	-7.621	51.865	44.243	-29.757	74.000
6489.000	-5.303	47.486	42.183	-31.817	74.000
7416.000	-2.728	47.040	44.312	-29.688	74.000
8343.000	0.134	44.083	44.217	-29.783	74.000
9270.000	-2.700	45.289	42.589	-31.411	74.000

Average Detector:

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Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : LeanOrder detectionShelf
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/19
Test Mode : Mode 1: Transmit(130x80) (903MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
39.327	3.591	29.866	33.457	-6.543	40.000
101.506	-3.217	30.306	27.089	-16.411	43.500
384.423	0.432	32.130	32.562	-13.438	46.000
521.218	3.349	29.262	32.612	-13.388	46.000
595.833	6.848	28.840	35.688	-10.312	46.000
818.125	7.786	28.735	36.521	-9.479	46.000
Vertical					
87.516	-7.217	44.512	37.295	-2.705	40.000
143.478	-5.124	36.853	31.729	-11.771	43.500
401.522	0.730	29.907	30.637	-15.363	46.000
612.933	3.762	28.474	32.236	-13.764	46.000
805.689	6.085	27.469	33.554	-12.446	46.000
894.295	8.705	26.853	35.558	-10.442	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : LeanOrder detectionShelf
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/19
Test Mode : Mode 1: Transmit(130x80) (920MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
43.990	-1.706	39.360	37.654	-2.346	40.000
544.535	4.450	28.988	33.438	-12.562	46.000
612.933	6.902	29.061	35.963	-10.037	46.000
729.519	6.489	28.765	35.254	-10.746	46.000
836.779	7.767	29.445	37.212	-8.788	46.000
961.138	8.393	28.552	36.946	-17.054	54.000
Vertical					
87.516	-7.217	45.192	37.975	-2.025	40.000
197.885	-0.212	29.090	28.878	-14.622	43.500
412.404	0.773	29.262	30.036	-15.964	46.000
634.696	3.887	29.192	33.078	-12.922	46.000
695.321	4.220	27.590	31.810	-14.190	46.000
942.484	9.061	27.556	36.617	-9.383	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : LeanOrder detectionShelf
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/19
Test Mode : Mode 1: Transmit(130x80) (927MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
43.990	-1.706	38.545	36.839	-3.161	40.000
193.221	-10.233	33.533	23.299	-20.201	43.500
298.926	-5.320	32.713	27.393	-18.607	46.000
533.654	3.930	29.162	33.093	-12.907	46.000
628.478	6.735	29.191	35.926	-10.074	46.000
734.183	6.586	28.988	35.573	-10.427	46.000
Vertical					
81.298	-9.384	46.397	37.013	-2.987	40.000
197.885	-0.212	35.133	34.921	-8.579	43.500
418.622	0.805	32.027	32.832	-13.168	46.000
637.804	3.907	28.944	32.851	-13.149	46.000
796.362	5.857	27.794	33.651	-12.349	46.000
976.683	9.234	29.305	38.539	-15.461	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : LeanOrder detectionShelf
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/19
Test Mode : Mode 2: Transmit(100x60) (903MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
39.327	3.591	28.043	31.634	-8.366	40.000
384.423	0.432	29.445	29.877	-16.123	46.000
558.526	5.101	28.077	33.178	-12.822	46.000
656.458	6.410	27.760	34.171	-11.829	46.000
841.442	7.765	27.381	35.146	-10.854	46.000
956.474	8.348	28.505	36.853	-9.147	46.000
Vertical					
81.298	-9.384	47.253	37.869	-2.131	40.000
143.478	-5.124	36.970	31.846	-11.654	43.500
407.740	0.755	30.281	31.036	-14.964	46.000
672.003	4.088	29.403	33.491	-12.509	46.000
804.135	6.044	28.810	34.854	-11.146	46.000
911.394	8.931	28.427	37.358	-8.642	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : LeanOrder detectionShelf
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/19
Test Mode : Mode 2: Transmit(100x60) (920MHz)

Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
34.663	4.359	29.445	33.804	-6.196	40.000
81.298	-8.300	36.161	27.861	-12.139	40.000
401.522	1.500	29.403	30.904	-15.096	46.000
597.388	6.924	28.988	35.912	-10.088	46.000
825.897	7.784	28.659	36.443	-9.557	46.000
984.455	8.671	28.474	37.145	-16.855	54.000
Vertical					
82.853	-8.845	45.314	36.468	-3.532	40.000
143.478	-5.124	36.257	31.133	-12.367	43.500
210.321	-0.027	30.406	30.379	-13.121	43.500
521.218	1.651	29.133	30.785	-15.215	46.000
749.728	5.081	28.552	33.633	-12.367	46.000
844.551	7.232	26.891	34.123	-11.877	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

Product : LeanOrder detectionShelf
Test Item : General Radiated Emission Data
Test Site : No.3 OATS
Test Date : 2018/04/19
Test Mode : Mode 2: Transmit(100x60) (927MHz)

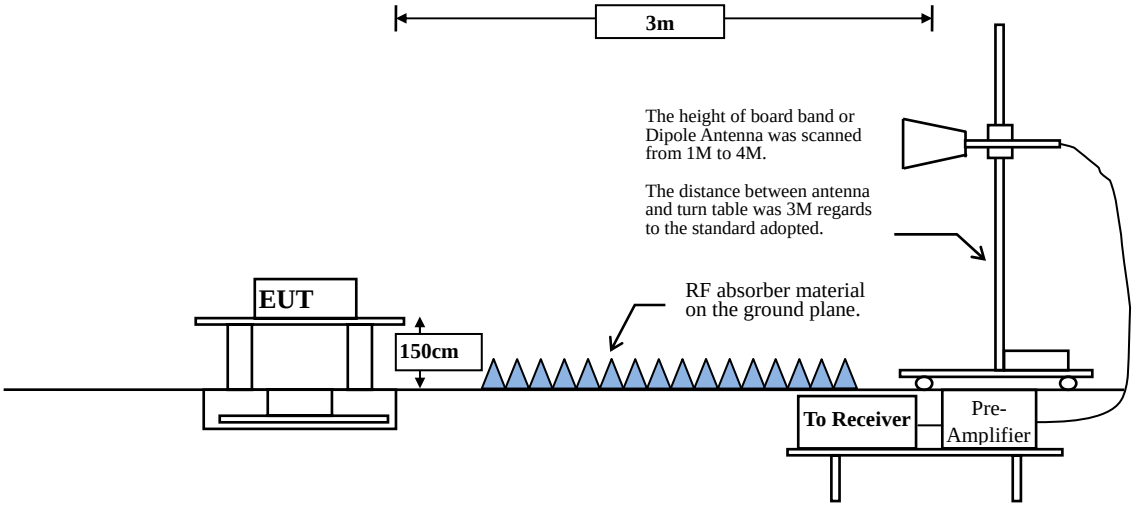
Frequency	Correct Factor	Reading Level	Measurement Level	Margin	Limit
MHz	dB	dBuV	dBuV/m	dB	dBuV/m
Horizontal					
39.327	3.591	29.445	33.036	-6.964	40.000
384.423	0.432	30.493	30.925	-15.075	46.000
427.949	1.737	29.998	31.735	-14.265	46.000
609.824	6.935	28.914	35.850	-10.150	46.000
821.234	7.784	28.944	36.728	-9.272	46.000
982.901	8.660	28.765	37.425	-16.575	54.000
Vertical					
81.298	-9.384	44.847	35.463	-4.537	40.000
197.885	-0.212	33.807	33.595	-9.905	43.500
404.631	0.751	29.017	29.768	-16.232	46.000
533.654	1.966	29.866	31.832	-14.168	46.000
715.529	4.496	29.090	33.586	-12.414	46.000
944.038	9.075	29.445	38.520	-7.480	46.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss –Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.
8. No emission found between lowest internal used/generated frequency to 30MHz.

4. Band Edge

4.1. Test Setup



4.2. Limit

Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

4.3. Test Procedure

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.
The bandwidth setting below 1GHz and above 1GHz on the field strength meter is 120 kHz and 1MHz, respectively.

4.4. Uncertainty

± 4.08 dB above 1GHz
± 4.22 dB below 1GHz

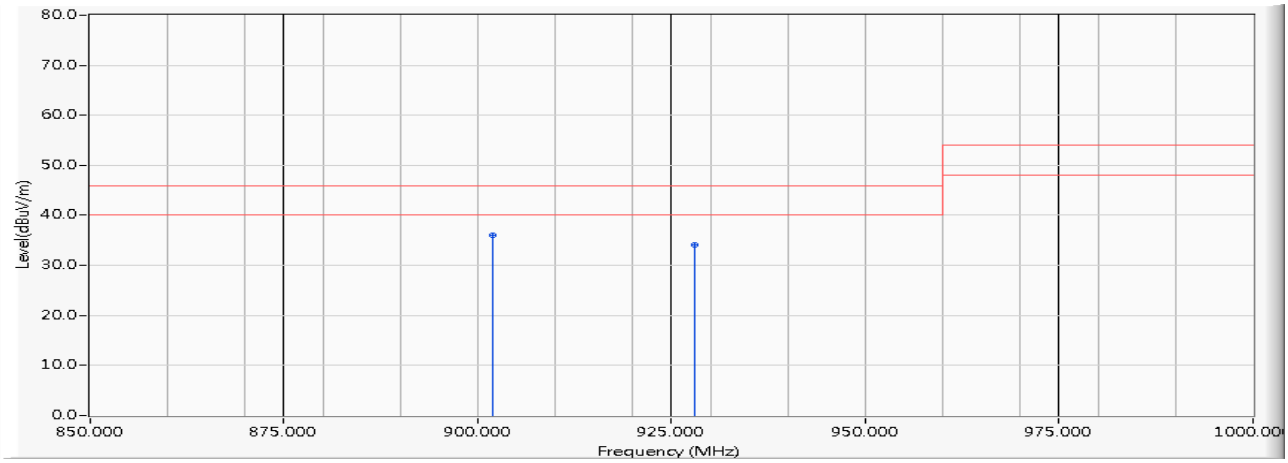
4.5. Test Result of Band Edge

Product : LeanOrder detectionShelf
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Date : 2018/04/21
Test Mode : Mode 1: Transmit(130x80) (903MHz)

RF Radiated Measurement (Horizontal):

No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Quasi-Peak Limit (dBuV/m)	Result
01(Quasi-Peak)	902.000	5.981	30.010	35.990	46.000	Pass
02(Quasi-Peak)	928.000	6.467	27.640	34.106	46.000	Pass

Figure Channel 01: Horizontal (Quasi-Peak)



Note:

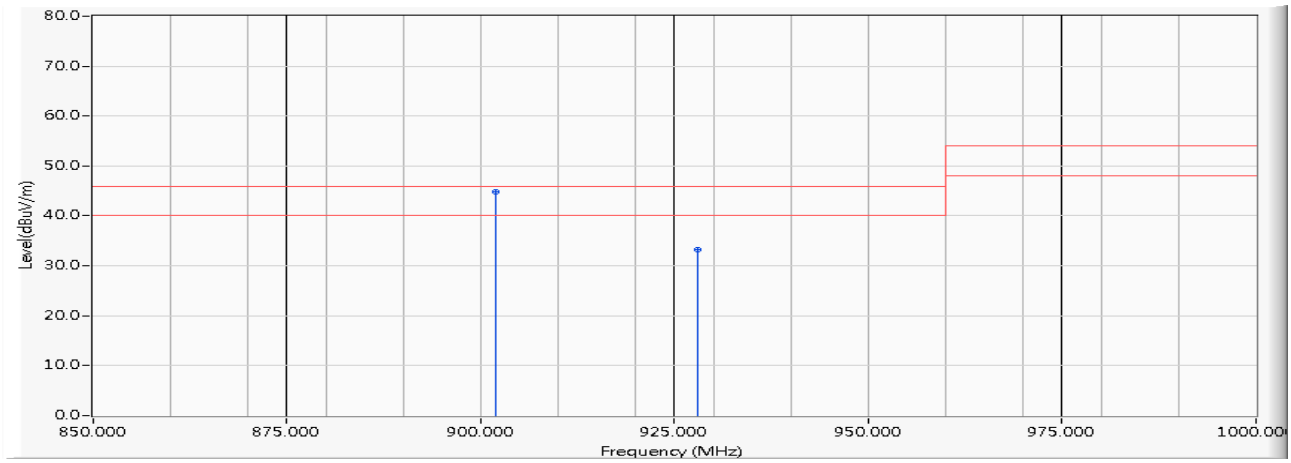
1. Quasi-Peak measurements: RBW=100kHz,VBW=1MHz,Sweep: Auto.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product : LeanOrder detectionShelf
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Date : 2018/04/21
Test Mode : Mode 1: Transmit(130x80) (903MHz)

RF Radiated Measurement (Vertical):

No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Quasi-Peak Limit (dBuV/m)	Result
01(Quasi-Peak)	902.000	5.981	38.940	44.920	46.000	Pass
02(Quasi-Peak)	928.000	6.467	26.840	33.306	46.000	Pass

Figure Channel 01: Vertical (Quasi-Peak)



Note:

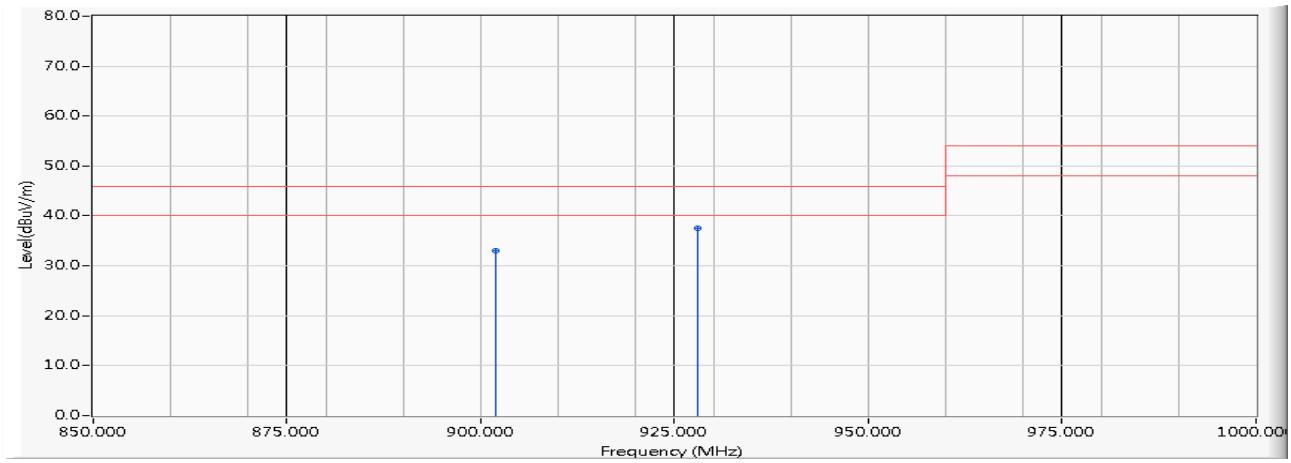
1. Quasi-Peak measurements: RBW=100kHz,VBW=1MHz,Sweep: Auto.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product : LeanOrder detectionShelf
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Date : 2018/04/21
Test Mode : Mode 1: Transmit(130x80) (927MHz)

RF Radiated Measurement (Horizontal):

No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Quasi-Peak Limit (dBuV/m)	Result
01(Quasi-Peak)	902.000	5.981	26.980	32.960	46.000	Pass
02(Quasi-Peak)	928.000	6.467	30.970	37.436	46.000	Pass

Figure Channel 03: Horizontal (Quasi-Peak)



Note:

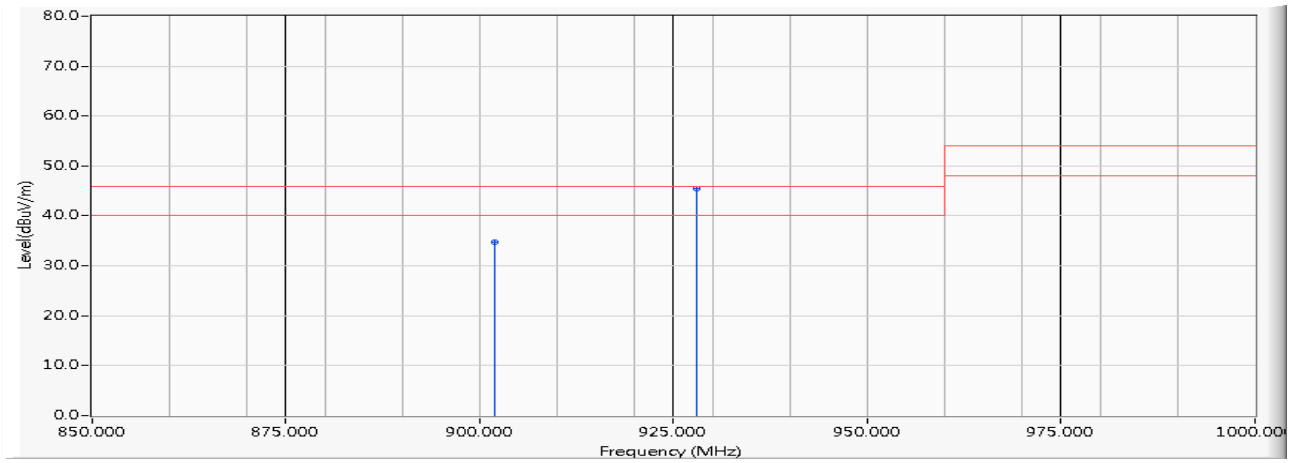
1. Quasi-Peak measurements: RBW=100kHz,VBW=1MHz,Sweep: Auto.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product	:	LeanOrder detectionShelf
Test Item	:	Band Edge Data
Test Site	:	No.3 OATS
Test Date	:	2018/04/21
Test Mode	:	Mode 1: Transmit(130x80) (927MHz)

RF Radiated Measurement (Vertical):

No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Quasi-Peak Limit (dBuV/m)	Result
01(Quasi-Peak)	902.000	5.981	28.800	34.780	46.000	Pass
02(Quasi-Peak)	928.000	6.467	38.920	45.386	46.000	Pass

Figure Channel 03: Vertical (Quasi-Peak)



Note:

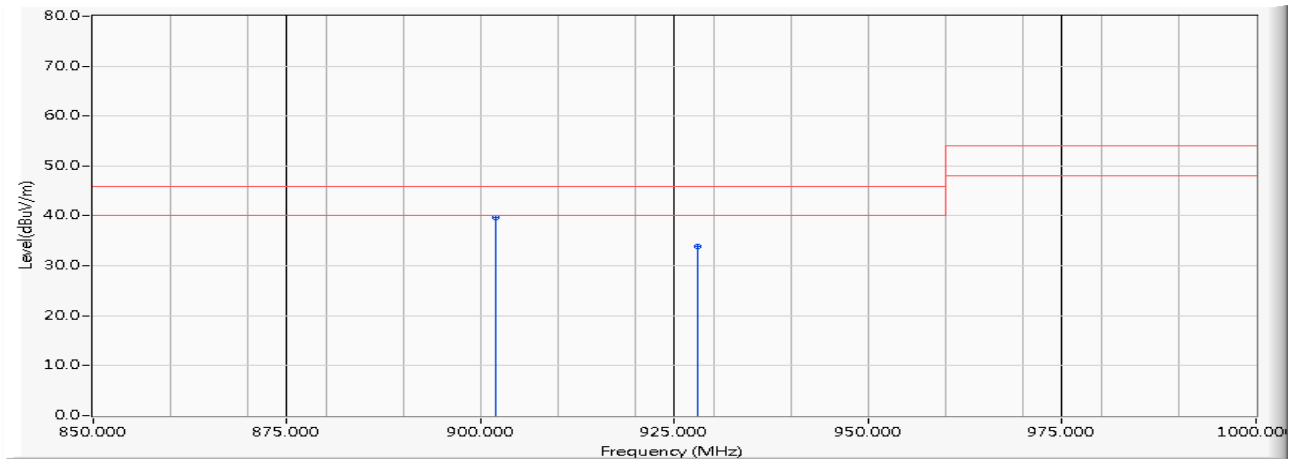
1. Quasi-Peak measurements: RBW=100kHz,VBW=1MHz,Sweep: Auto.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product : LeanOrder detectionShelf
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Date : 2018/04/21
Test Mode : Mode 2: Transmit(100x60) (903MHz)

RF Radiated Measurement (Horizontal):

No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Quasi-Peak Limit (dBuV/m)	Result
01(Quasi-Peak)	902.000	5.981	33.660	39.640	46.000	Pass
02(Quasi-Peak)	928.000	6.467	27.440	33.906	46.000	Pass

Figure Channel 01: Horizontal (Quasi-Peak)



Note:

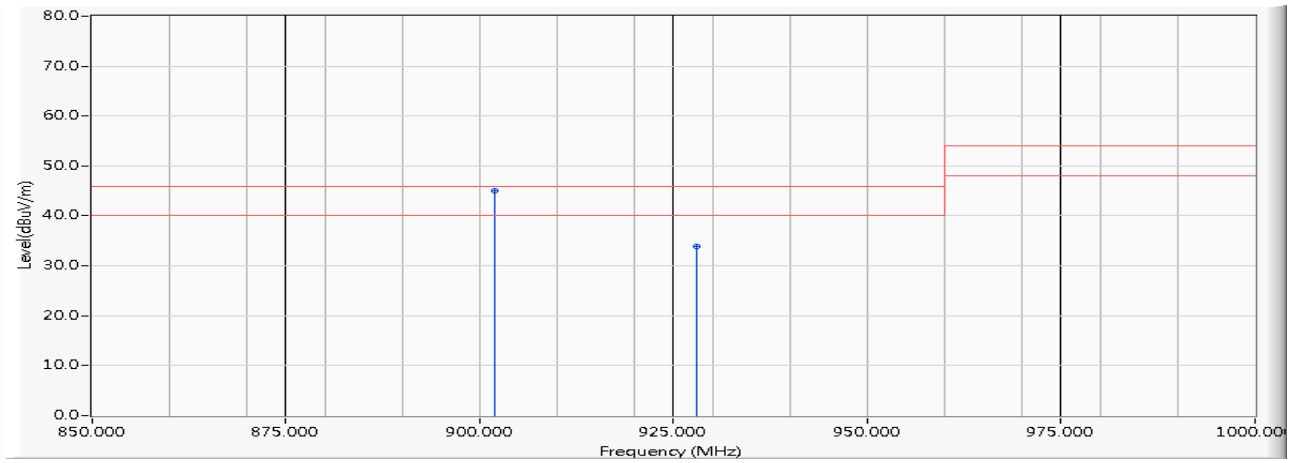
1. Quasi-Peak measurements: RBW=100kHz,VBW=1MHz,Sweep: Auto.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product : LeanOrder detectionShelf
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Date : 2018/04/21
Test Mode : Mode 2: Transmit(100x60) (903MHz)

RF Radiated Measurement (Vertical):

No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Quasi-Peak Limit (dBuV/m)	Result
01(Quasi-Peak)	902.000	5.981	39.120	45.100	46.000	Pass
02(Quasi-Peak)	928.000	6.467	27.440	33.906	46.000	Pass

Figure Channel 01: Vertical (Quasi-Peak)



Note:

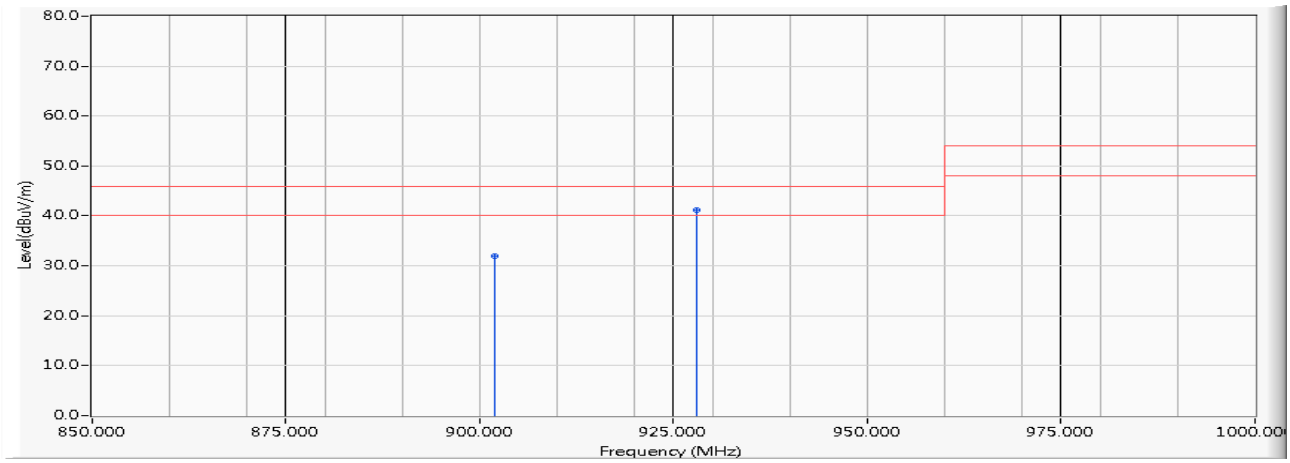
1. Quasi-Peak measurements: RBW=100kHz,VBW=1MHz,Sweep: Auto.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product : LeanOrder detectionShelf
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Date : 2018/04/21
Test Mode : Mode 2: Transmit(100x60) (927MHz)

RF Radiated Measurement (Horizontal):

No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Quasi-Peak Limit (dBuV/m)	Result
01(Quasi-Peak)	902.000	5.981	26.020	32.000	46.000	Pass
02(Quasi-Peak)	928.000	6.467	34.780	41.246	46.000	Pass

Figure Channel 03: Horizontal (Quasi-Peak)



Note:

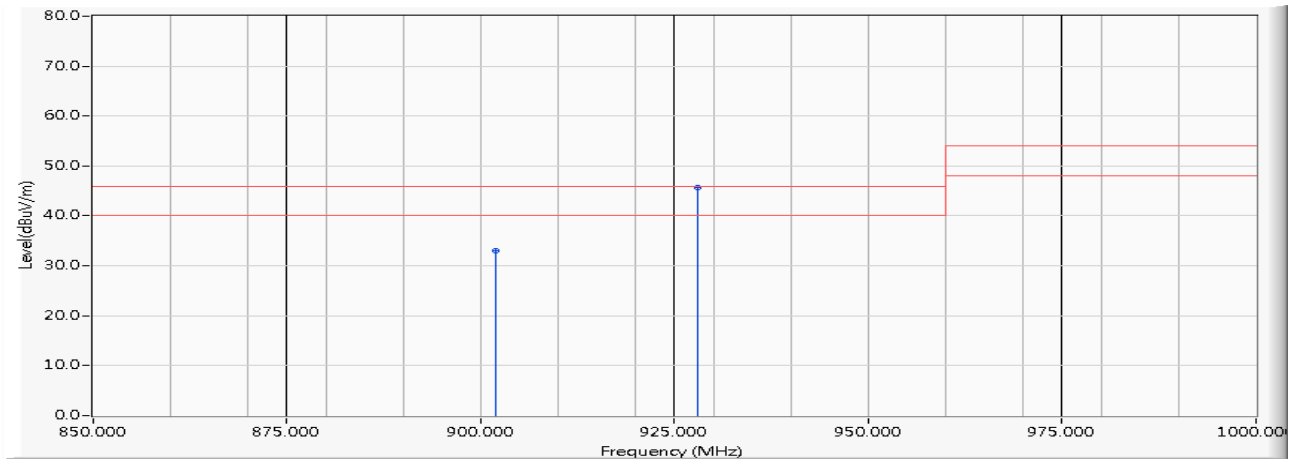
1. Quasi-Peak measurements: RBW=100kHz,VBW=1MHz,Sweep: Auto.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

Product : LeanOrder detectionShelf
Test Item : Band Edge Data
Test Site : No.3 OATS
Test Date : 2018/04/21
Test Mode : Mode 2: Transmit(100x60) (927MHz)

RF Radiated Measurement (Vertical):

No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Quasi-Peak Limit (dBuV/m)	Result
01(Quasi-Peak)	902.000	5.981	27.030	33.010	46.000	Pass
02(Quasi-Peak)	928.000	6.467	39.240	45.706	46.000	Pass

Figure Channel 03: Vertical (Quasi-Peak)



Note:

1. Quasi-Peak measurements: RBW=100kHz,VBW=1MHz,Sweep: Auto.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor.

5. EMI Reduction Method During Compliance Testing

No modification was made during testing.