

# TEST REPORT

**Applicant:** ST Engineering Telematics Wireless Ltd.

**Address of Applicant:** 26 Hamelacha Street, Holon 5811801, Israel

**Manufacturer/Factory:** ST Engineering Telematics Wireless Ltd.

**Address of Manufacturer/Factory:** 26 Hamelacha Street, Holon 5811801, Israel

**Equipment Under Test (EUT)**

Product Name: Meter Interface Unit

Model No.: MIU1USLB

**FCC ID:** NTAMIU1USLB

**Applicable standards:** FCC CFR Title 47 Part 15 Subpart C Section 15.247

**Date of sample receipt:** September 22, 2021

**Date of Test:** September 23, 2021-November 03, 2021

**Date of report issued:** November 03, 2021

**Test Result :** PASS \*

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



**Robinson Luo**

**Laboratory Manager**

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**NVLAP**®  
TESTING  
NVLAP LAB CODE 600179-0

## 2 Version

Version No.	Date	Description
00	November 03, 2021	Original

**Prepared By:**

*Tiger Chen*

**Date:**

November 03, 2021

**Project Engineer**

**Check By:**

*Robinson Lu*

**Date:**

November 03, 2021

**Reviewer**

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## 4 Test Summary

Test Item	Section in CFR 47	Result
Antenna requirement	15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	15.207	N/A
Conducted Output Power	15.247 (b)(3)	Pass
Channel Bandwidth	15.247 (a)(2)	Pass
Power Spectral Density	15.247 (e)	Pass
Band Edge	15.247(d)	Pass
Spurious Emission	15.205/15.209	Pass

### Remarks:

1. Pass: The EUT complies with the essential requirements in the standard.
2. N/A: Not applicable.
3. Test according to ANSI C63.10:2013

### Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	9kHz-30MHz	3.1dB	(1)
Radiated Emission	30MHz-200MHz	3.8039dB	(1)
Radiated Emission	200MHz-1GHz	3.9679dB	(1)
Radiated Emission	1GHz-18GHz	4.29dB	(1)
Radiated Emission	18GHz-40GHz	3.30dB	(1)
AC Power Line Conducted Emission	0.15MHz ~ 30MHz	3.44dB	(1)

Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

## 5 General Information

### 5.1 General Description of EUT

Product Name:	Meter Interface Unit
Model No.:	MIU1USLB
Serial No.:	0B01001124
Hardware version:	Rev E
Software version:	Fc 02
Test sample(s) ID:	GTS202109000198-1
Sample(s) Status:	Engineer sample
Operation Frequency:	903MHz~927MHz
Channel Numbers:	16
Channel Separation:	1.6MHz
Modulation Type:	LORA
Antenna Type:	Internal Antenna
Antenna Gain:	1.5dBi
Power Supply:	DC 3.6V Li-ion Battery

Operation Frequency each of channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	903	5	909.4	9	915.8	13	922.2
2	904.6	6	911	10	917.4	14	923.8
3	906.2	7	912.6	11	919	15	925.4
4	907.8	8	914.2	12	920.6	16	927

Note: in section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The lowest channel	903MHz
The middle channel	915.8MHz
The Highest channel	927MHz



## 5.2 Test mode

Transmitting mode	Keep the EUT in transmitting mode.
Remark: During the test, , the duty cycle >98%, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.	

## 5.3 Description of Support Units

None.
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## 5.4 Deviation from Standards

None.
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## 5.5 Abnormalities from Standard Conditions

None.
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## 5.6 Test Facility

<p>The test facility is recognized, certified, or accredited by the following organizations:</p> <ul style="list-style-type: none"><li>● <b>FCC—Registration No.: 381383</b> Designation Number: CN5029 Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files.</li><li>● <b>IC —Registration No.: 9079A</b> CAB identifier: CN0091 The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing</li><li>● <b>NVLAP (LAB CODE:600179-0)</b> Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).</li></ul>
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## 5.7 Test Location

All tests were performed at:
Global United Technology Services Co., Ltd. Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102 Tel: 0755-27798480 Fax: 0755-27798960

## 5.8 Additional Instructions

Test Software	Special test software provided by manufacturer
Power level setup	Default

## 6 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	July. 02 2020	July. 01 2025
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June. 24 2021	June. 23 2022
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 24 2021	June. 23 2022
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 24 2021	June. 23 2022
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 24 2021	June. 23 2022
7	EMI Test Software	AUDIX	E3	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	June. 24 2021	June. 23 2022
9	Coaxial Cable	GTS	N/A	GTS211	June. 24 2021	June. 23 2022
10	Coaxial cable	GTS	N/A	GTS210	June. 24 2021	June. 23 2022
11	Coaxial Cable	GTS	N/A	GTS212	June. 24 2021	June. 23 2022
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 24 2021	June. 23 2022
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 24 2021	June. 23 2022
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 24 2021	June. 23 2022
15	Band filter	Amindeon	82346	GTS219	June. 24 2021	June. 23 2022
16	Power Meter	Anritsu	ML2495A	GTS540	June. 24 2021	June. 23 2022
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 24 2021	June. 23 2022
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 24 2021	June. 23 2022
19	Splitter	Agilent	11636B	GTS237	June. 24 2021	June. 23 2022
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 24 2021	June. 23 2022
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 17 2021	Oct. 16 2022
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 17 2021	Oct. 16 2022
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 17 2021	Oct. 16 2022
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 24 2021	June. 23 2022

RF Conducted Test:						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	MXA Signal Analyzer	Agilent	N9020A	GTS566	June. 24 2021	June. 23 2022
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 24 2021	June. 23 2022
3	Spectrum Analyzer	Agilent	E4440A	GTS533	June. 24 2021	June. 23 2022
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	June. 24 2021	June. 23 2022
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	June. 24 2021	June. 23 2022
6	USB RF Power Sensor	DARE	RPR3006W	GTS569	June. 24 2021	June. 23 2022
7	RF Switch Box	Shongyi	RFSW3003328	GTS571	June. 24 2021	June. 23 2022
8	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	June. 24 2021	June. 23 2022

General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Humidity/ Temperature Indicator	KTJ	TA328	GTS243	June. 24 2021	June. 23 2022
2	Barometer	ChangChun	DYM3	GTS255	June. 24 2021	June. 23 2022

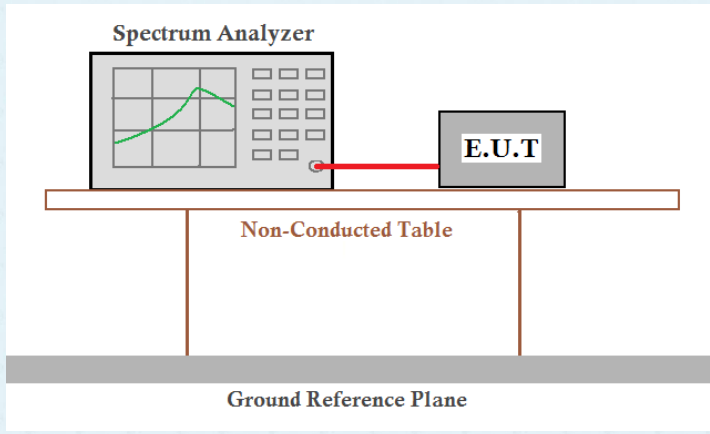


## 7 Test results and Measurement Data

### 7.1 Antenna requirement

<b>Standard requirement:</b>	FCC Part15 C Section 15.203
<b>15.203 requirement:</b> An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
<b>E.U.T Antenna:</b>	
<i>The antenna is internal antenna, the best case gain of the antenna is 1.5dBi, reference to the appendix II for details.</i>	

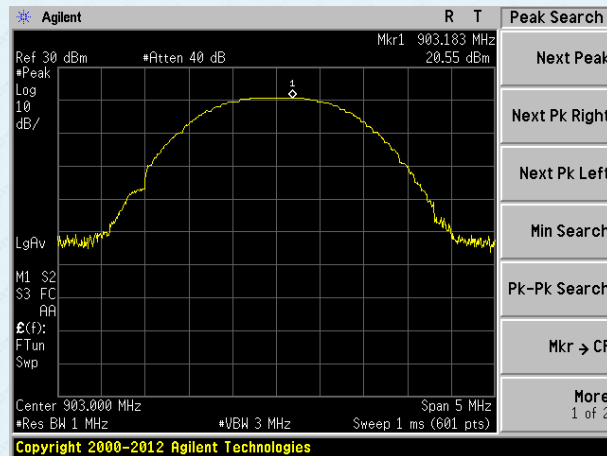
## 7.2 Conducted Output Power

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 15.247 Meas Guidance v05r02
Limit:	30dBm
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.</p>
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

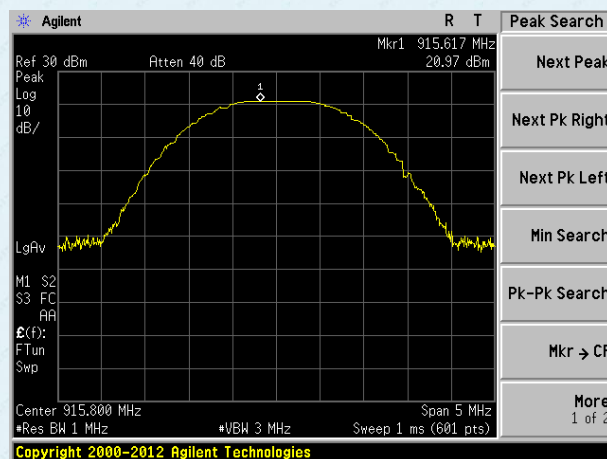
### Measurement Data

Test channel	Peak Output Power (dBm)	Limit(dBm)	Result
Lowest	20.55	30.00	Pass
Middle	20.97		
Highest	21.09		

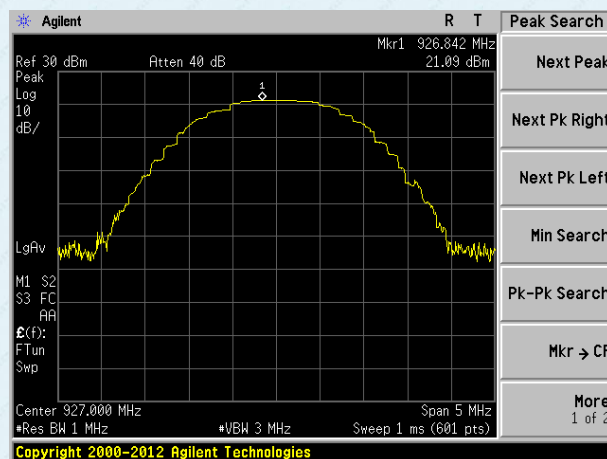
Test plot as follows:



Lowest channel

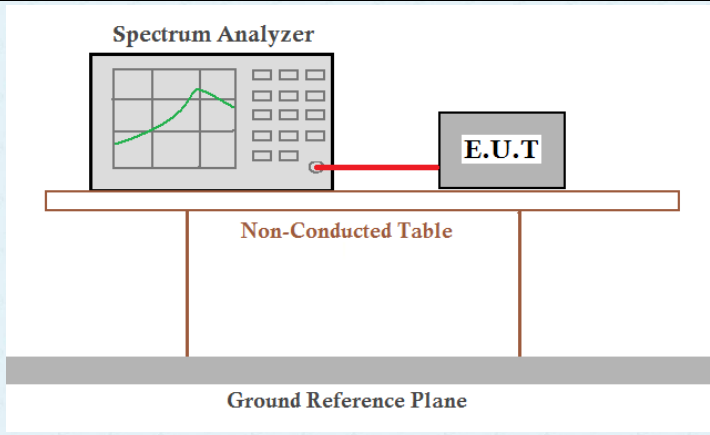


Middle channel



Highest channel

### 7.3 Channel Bandwidth

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 15.247 Meas Guidance v05r02
Limit:	Channel Bandwidth >500KHz
Test setup:	
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

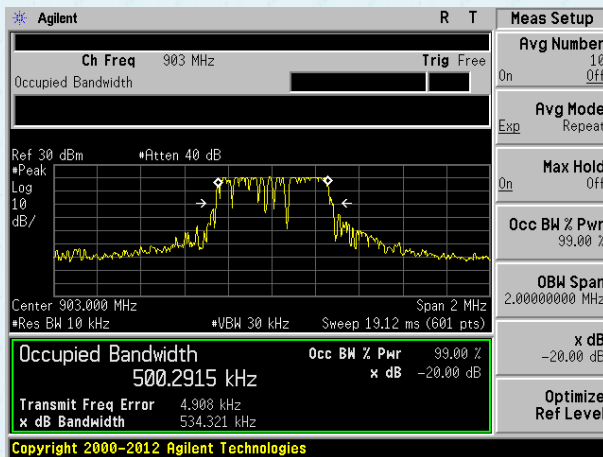
### Measurement Data

Test channel	Channel Bandwidth (kHz)	Limit(KHz)	Result
Lowest	534.321	>500	Pass
Middle	579.671		
Highest	581.251		

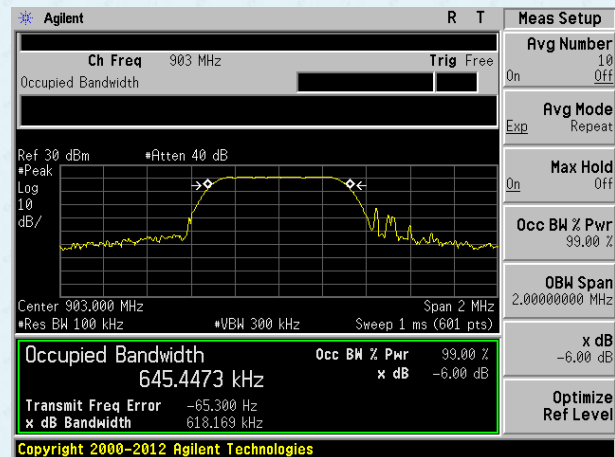
Test channel	99% Bandwidth (kHz)	Result
Lowest	500.2915	Report only
Middle	503.4488	
Highest	519.1888	

Test plot as follows:

99% bandwidth



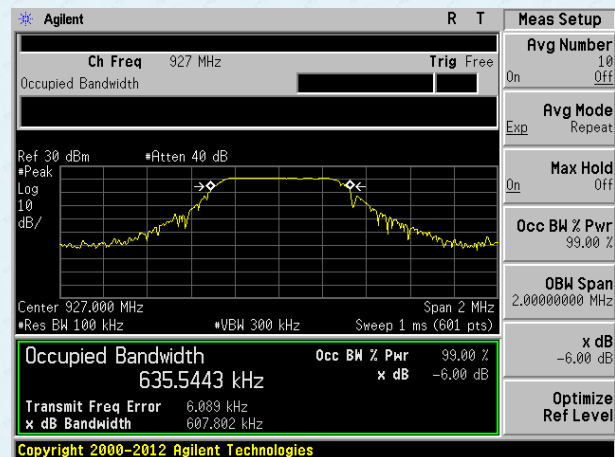
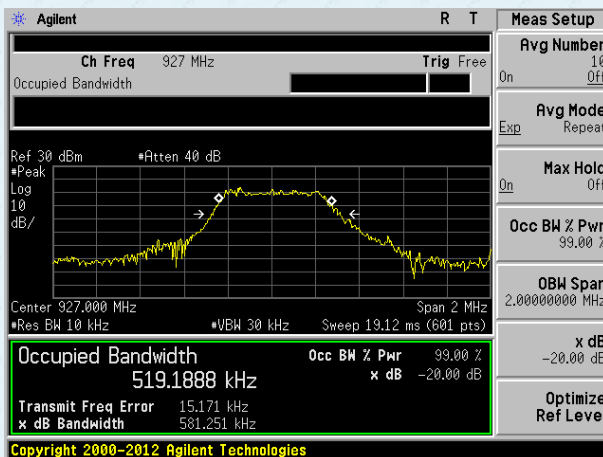
-6dB bandwidth



Lowest channel



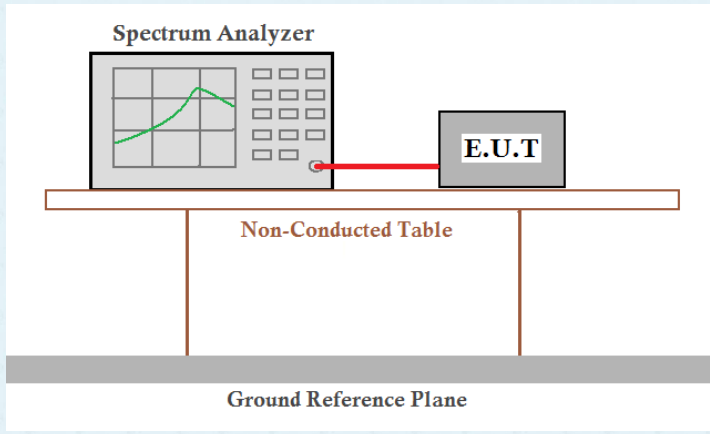
Middle channel



Highest channel



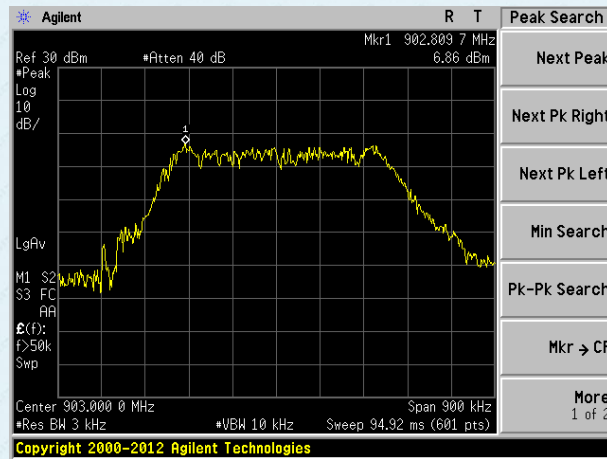
## 7.4 Power Spectral Density

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 15.247 Meas Guidance v05r02
Limit:	8dBm/3kHz
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T. are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.</p>
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

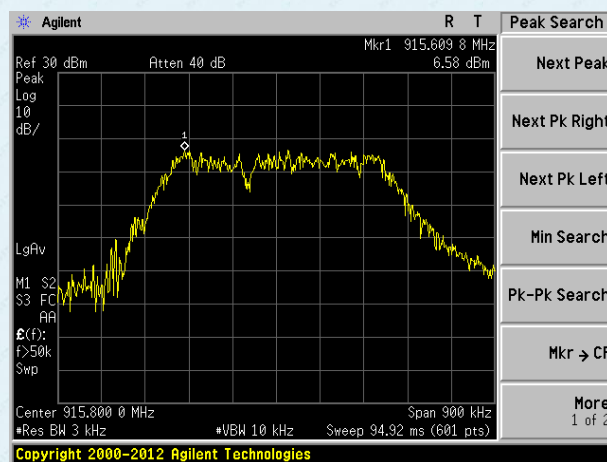
### Measurement Data

Test channel	Power Spectral Density (dBm/3kHz)	Limit(dBm/3kHz)	Result
Lowest	6.86	8.00	Pass
Middle	6.58		
Highest	7.04		

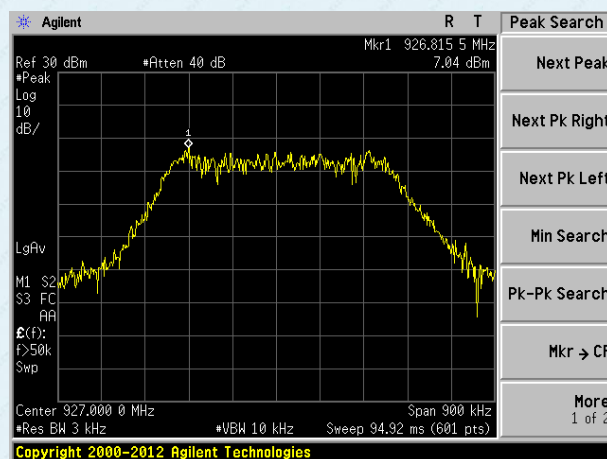
Test plot as follows:



Lowest channel

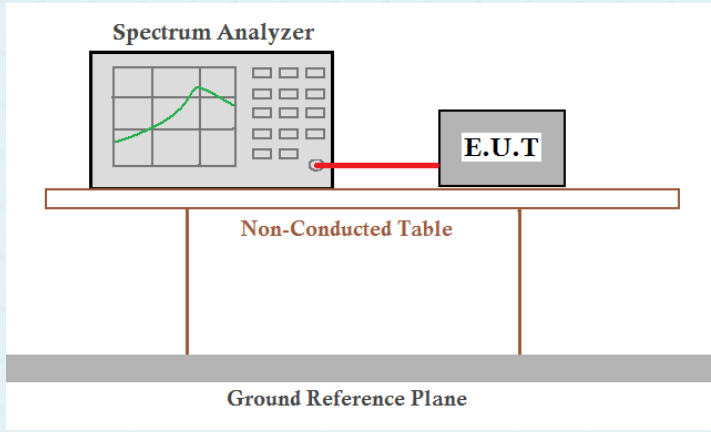


Middle channel

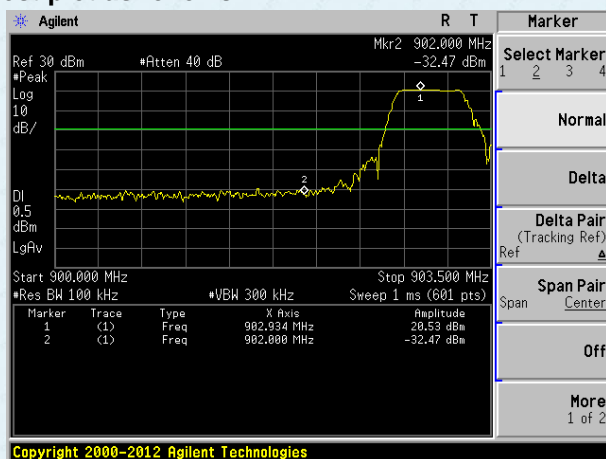


Highest channel

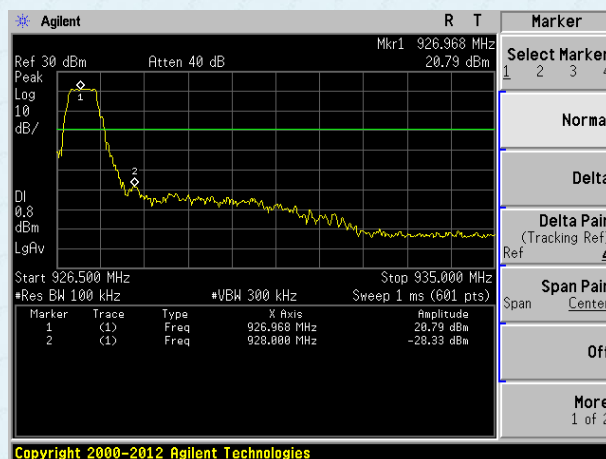
## 7.5 Band edges

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 15.247 Meas Guidance v05r02
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test setup:	 <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table, which is supported by a Ground Reference Plane.</p>
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

### Test plot as follows:



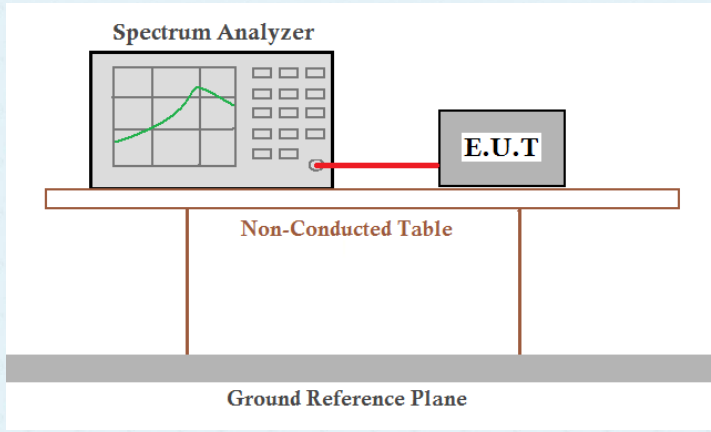
Lowest channel



Highest channel

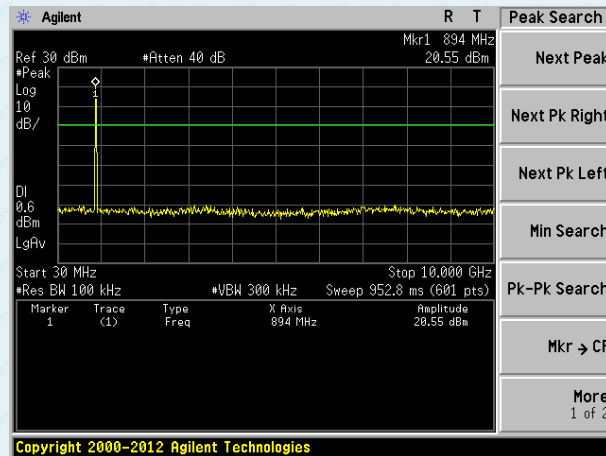
## 7.6 Spurious Emission

### 7.6.1 Conducted Emission Method

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	ANSI C63.10:2013 and KDB558074 D01 15.247 Meas Guidance v05r02
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test setup:	 <p>The diagram illustrates the test setup for conducted emission measurement. A Spectrum Analyzer is connected via a red cable to an E.U.T. (Equipment Under Test). Both are placed on a Non-Conducted Table, which sits on a Ground Reference Plane.</p>
Test Instruments:	Refer to section 6.0 for details
Test mode:	Refer to section 5.2 for details
Test results:	Pass

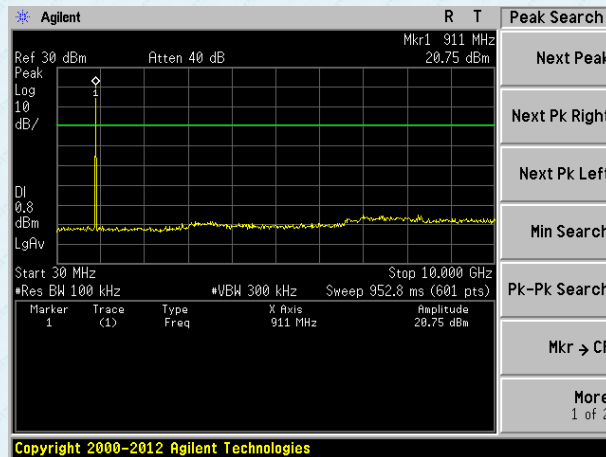
Test plot as follows:

Lowest channel



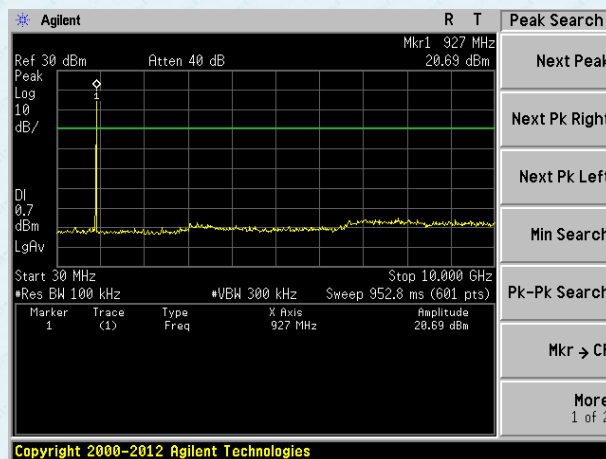
30MHz~25GHz

Middle channel



30MHz~25GHz

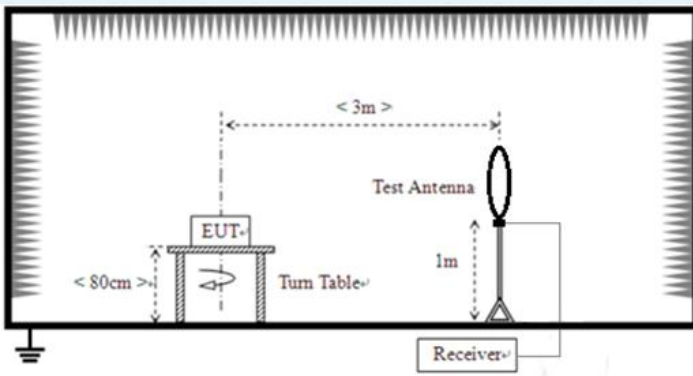
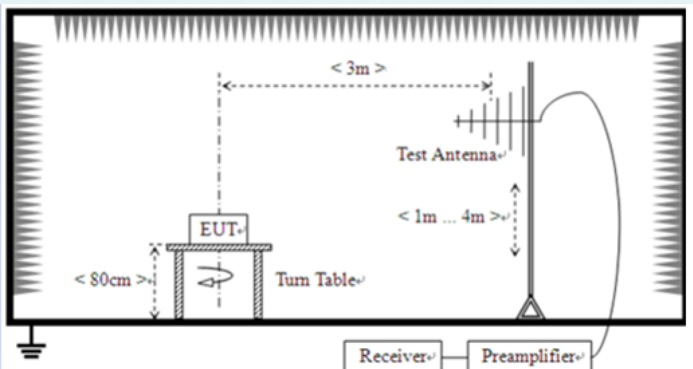
Highest channel

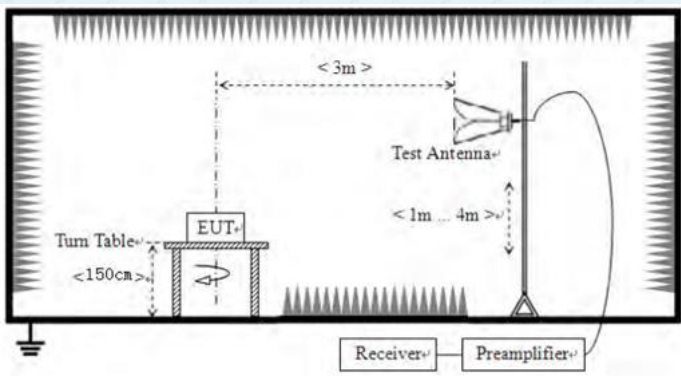


30MHz~25GHz



## 7.6.2 Radiated Emission Method

Test Requirement:	FCC Part15 C Section 15.209				
Test Method:	ANSI C63.10:2013				
Test Frequency Range:	9kHz to 10GHz				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
	150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Limit: (Spurious Emissions)	Frequency	Limit (uV/m)	Value	Measurement Distance	
	0.009MHz-0.490MHz	2400/F(KHz)	QP	300m	
	0.490MHz-1.705MHz	24000/F(KHz)	QP	30m	
	1.705MHz-30MHz	30	QP	30m	
	30MHz-88MHz	100	QP	3m	
	88MHz-216MHz	150	QP		
	216MHz-960MHz	200	QP		
	960MHz-1GHz	500	QP		
	Above 1GHz	500	Average		
		5000	Peak		
Test setup:	For radiated emissions from 9kHz to 30MHz				
					
	For radiated emissions from 30MHz to 1GHz				
					

	<p>For radiated emissions above 1GHz</p> 					
Test Procedure:	<ol style="list-style-type: none"> <li>1. The EUT was placed on the top of a rotating table (0.8m for below 1G and 1.5m for above 1G) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.</li> <li>4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</li> </ol>					
Test Instruments:	Refer to section 6.0 for details					
Test mode:	Refer to section 5.2 for details					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar
Test results:	Pass					

**Remark:**

Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the X-axis which it is worse case.

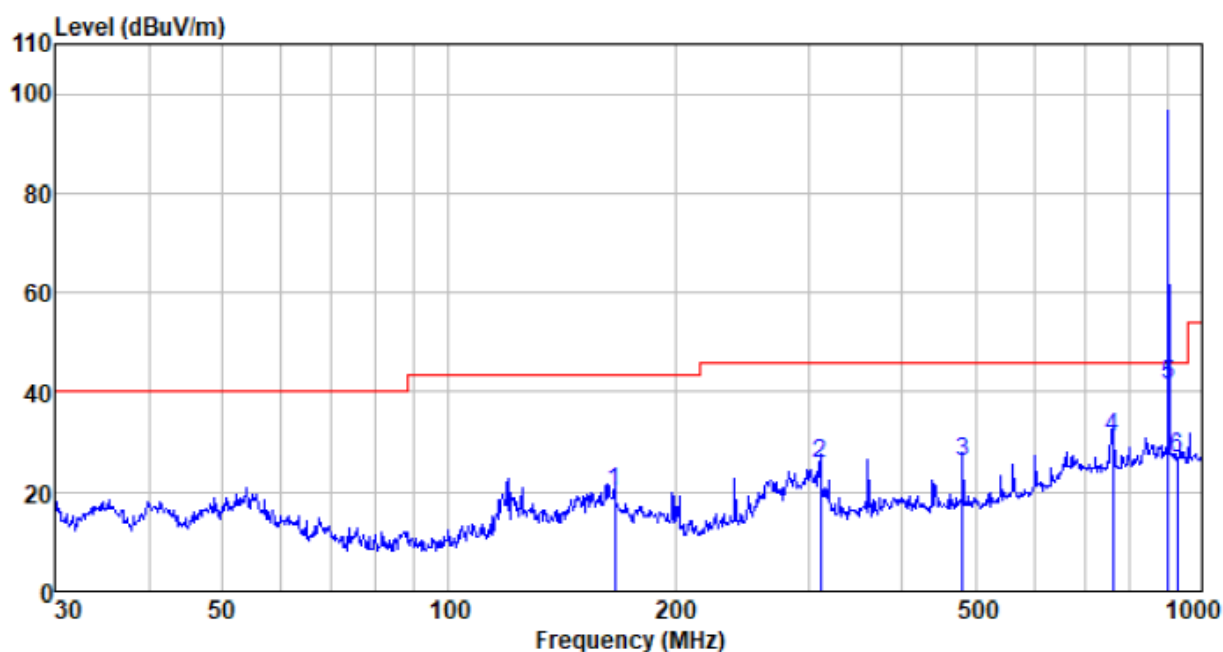
**Measurement data:**

■ 9 kHz ~ 30 MHz

The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

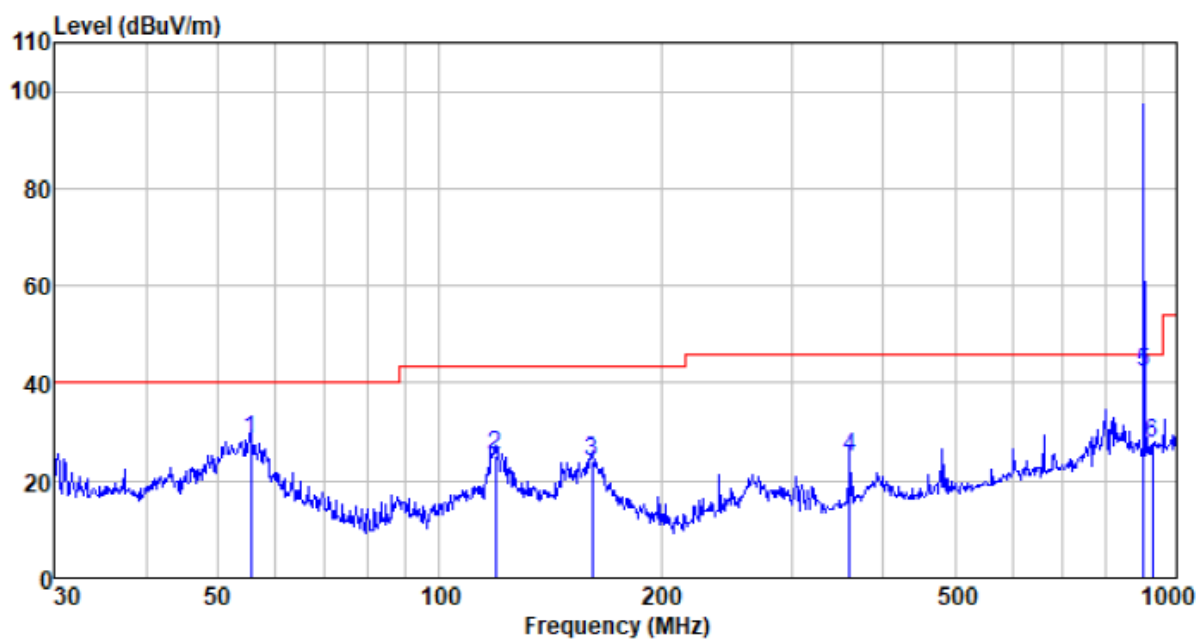
■ Below 1GHz

Test channel:	Lowest	Polarization:	Horizontal
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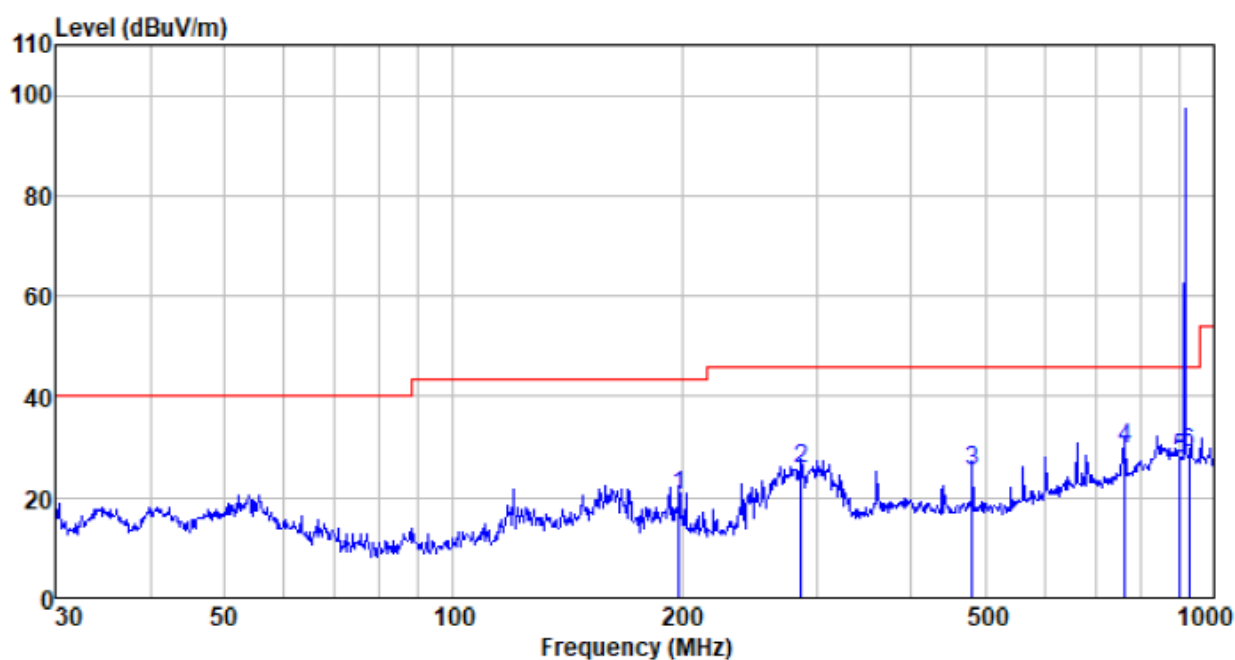
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
166.068	42.68	12.57	1.66	37.17	19.74	43.50	-23.76	QP
311.087	48.04	12.71	2.42	37.43	25.74	46.00	-20.26	QP
480.528	43.81	16.38	3.22	37.51	25.90	46.00	-20.10	QP
760.704	42.54	21.70	4.32	37.62	30.94	46.00	-15.06	QP
902.000	51.23	22.99	4.87	37.60	41.49	46.00	-4.51	QP
928.000	35.96	23.53	4.96	37.57	26.88	46.00	-19.12	QP

Test channel:	Lowest	Polarization:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
55.415	51.19	12.53	0.82	36.26	28.28	40.00	-11.72	QP
119.018	49.82	10.89	1.35	36.87	25.19	43.50	-18.31	QP
160.909	46.78	12.73	1.63	37.14	24.00	43.50	-19.50	QP
360.448	45.86	13.82	2.67	37.48	24.87	46.00	-21.13	QP
902.000	52.06	22.99	4.87	37.60	42.32	46.00	-3.68	QP
928.000	36.55	23.53	4.96	37.57	27.47	46.00	-18.53	QP

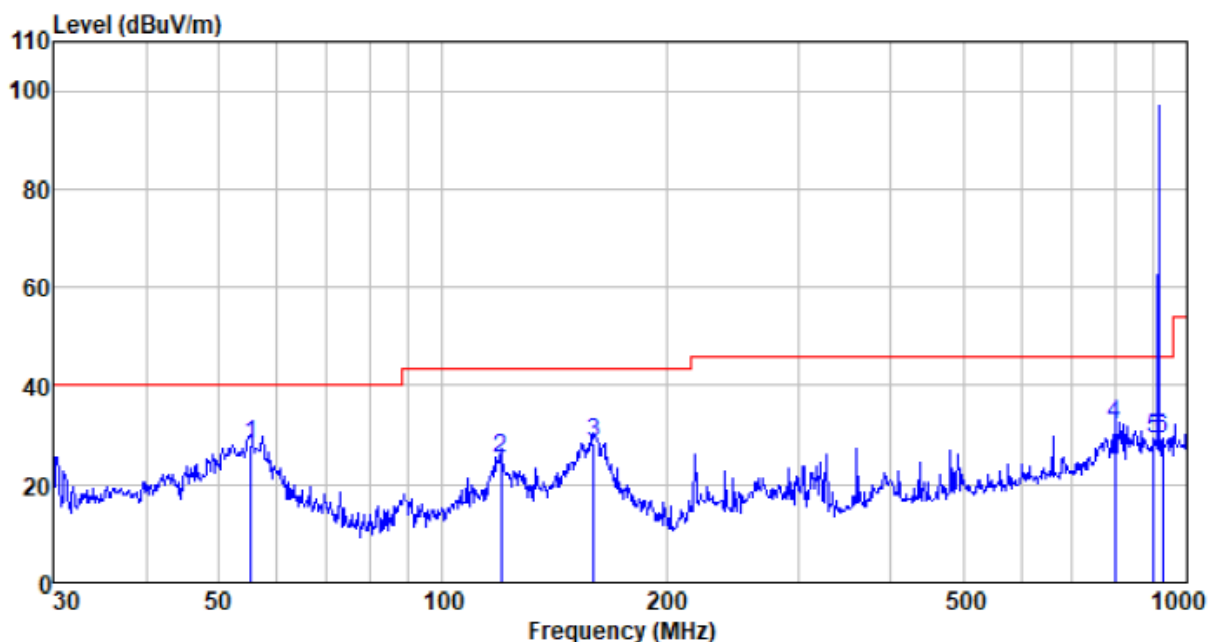
Test channel:	Middle	Polarization:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
197.893	46.61	9.36	1.83	37.32	20.48	43.50	-23.02	QP
286.982	48.76	12.03	2.30	37.41	25.68	46.00	-20.32	QP
480.528	43.21	16.38	3.22	37.51	25.30	46.00	-20.70	QP
763.376	41.21	21.73	4.32	37.62	29.64	46.00	-16.36	QP
902.000	37.35	22.99	4.87	37.60	27.61	46.00	-18.39	QP
928.000	37.91	23.53	4.96	37.57	28.83	46.00	-17.17	QP

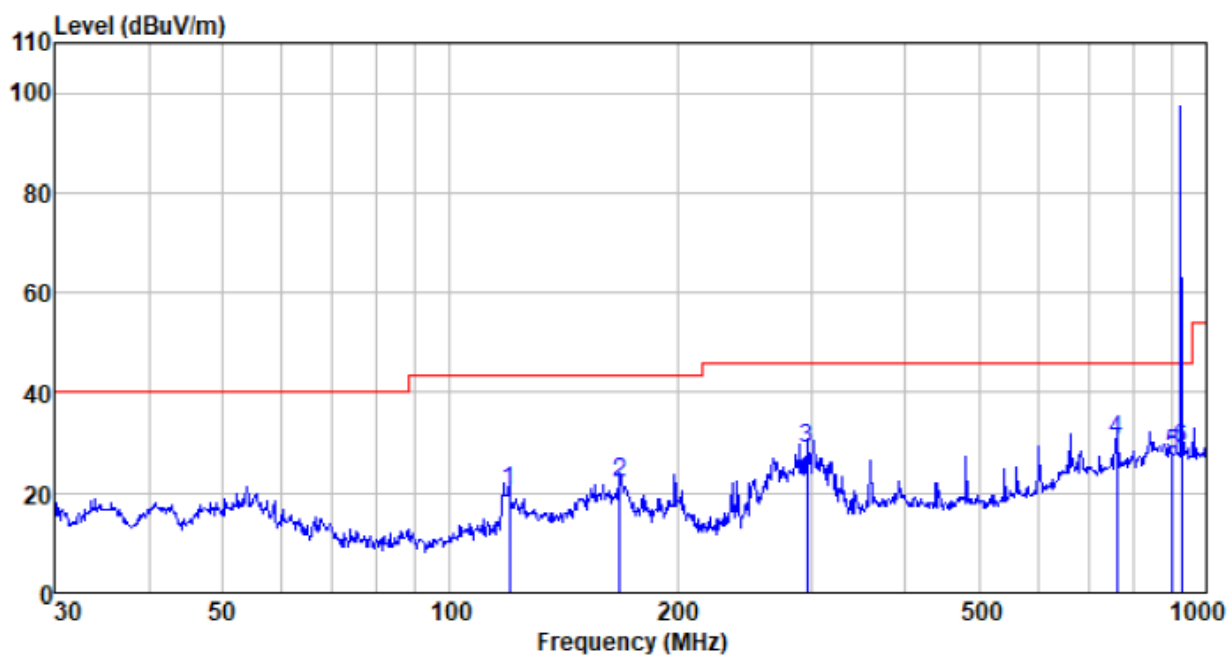


Test channel:	Middle	Polarization:	Vertical
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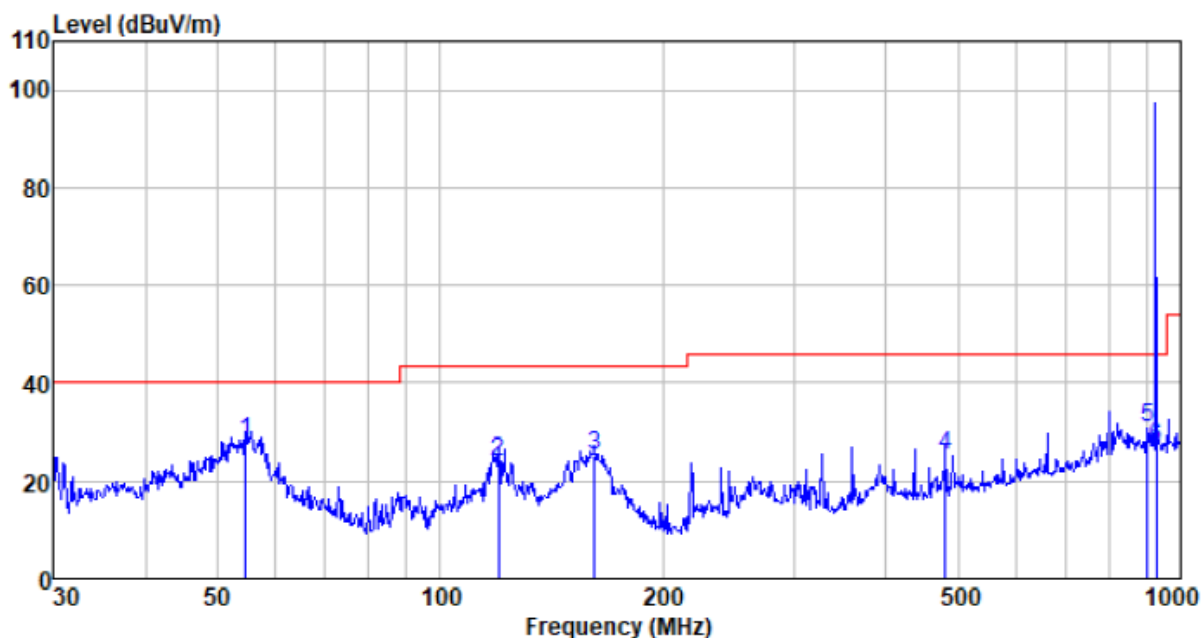
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
55.221	51.08	12.54	0.82	36.26	28.18	40.00	-11.82	QP
119.856	49.76	10.98	1.36	36.88	25.22	43.50	-18.28	QP
159.784	51.08	12.76	1.63	37.13	28.34	43.50	-15.16	QP
798.980	43.10	22.23	4.45	37.62	32.16	46.00	-13.84	QP
902.000	38.91	22.99	4.87	37.60	29.17	46.00	-16.83	QP
928.000	38.22	23.53	4.96	37.57	29.14	46.00	-16.86	QP

Test channel:	Highest	Polarization:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
119.856	44.93	10.98	1.36	36.88	20.39	43.50	-23.11	QP
167.824	45.07	12.52	1.67	37.18	22.08	43.50	-21.42	QP
296.184	51.80	12.29	2.34	37.42	29.01	46.00	-16.99	QP
760.704	42.18	21.70	4.32	37.62	30.58	46.00	-15.42	QP
902.000	37.37	22.99	4.87	37.60	27.63	46.00	-18.37	QP
928.000	37.91	23.53	4.96	37.57	28.83	46.00	-17.17	QP

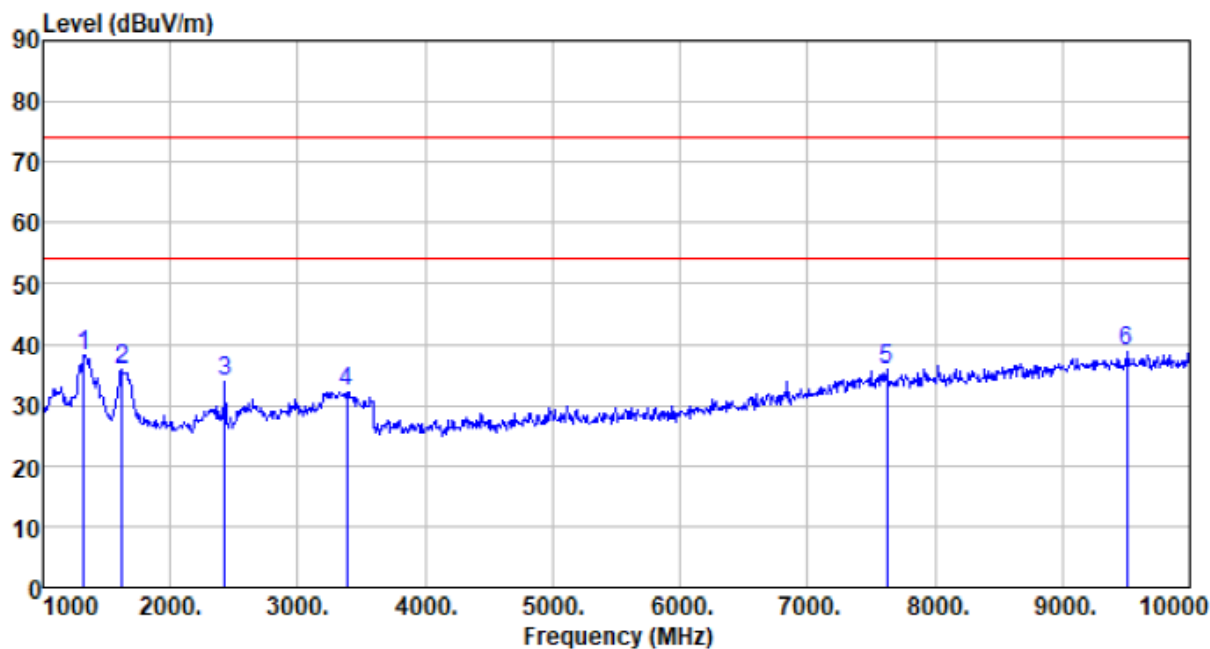
Test channel:	Highest	Polarization:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
54.643	50.76	12.58	0.81	36.25	27.90	40.00	-12.10	QP
119.856	48.44	10.98	1.36	36.88	23.90	43.50	-19.60	QP
161.474	47.97	12.71	1.64	37.14	25.18	43.50	-18.32	QP
480.528	43.15	16.38	3.22	37.51	25.24	46.00	-20.76	QP
902.000	40.42	22.99	4.87	37.60	30.68	46.00	-15.32	QP
928.000	36.04	23.53	4.96	37.57	26.96	46.00	-19.04	QP

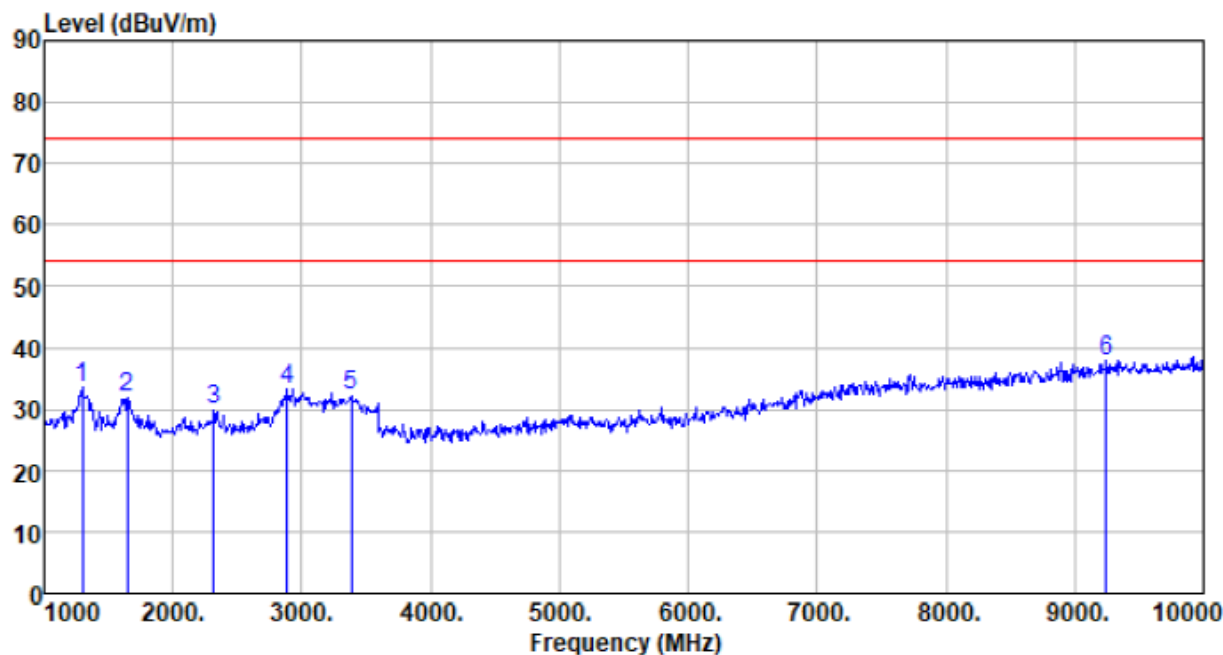
■ Above 1GHz

Test channel:	Lowest	Polarization:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
1324.000	47.13	24.95	2.20	36.02	38.26	74.00	-35.74	Peak
1621.000	44.16	25.47	2.36	36.26	35.73	74.00	-38.27	Peak
2431.000	40.58	27.12	2.94	36.88	33.76	74.00	-40.24	Peak
3385.000	37.08	28.91	3.64	37.34	32.29	74.00	-41.71	Peak
7624.000	27.89	36.72	6.80	35.50	35.91	74.00	-38.09	Peak
9505.000	27.49	38.20	7.93	34.86	38.76	74.00	-35.24	Peak

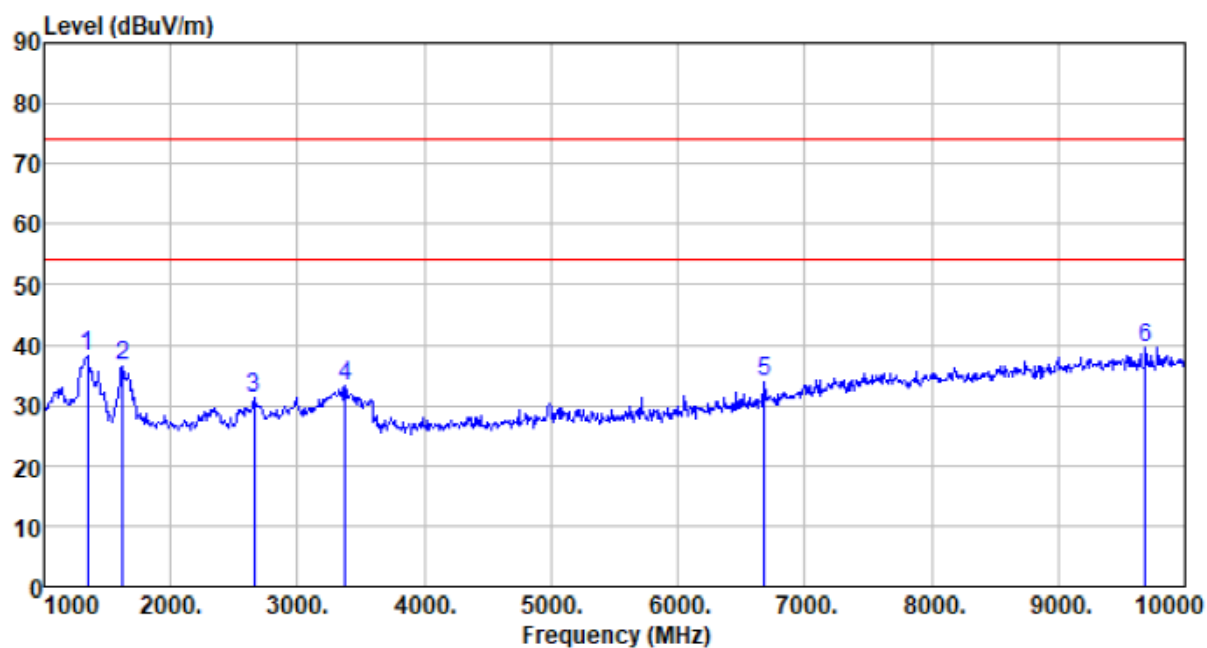
Test channel:	Lowest	Polarization:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
1297.000	42.31	24.89	2.19	36.00	33.39	74.00	-40.61	Peak
1648.000	40.24	25.51	2.37	36.28	31.84	74.00	-42.16	Peak
2314.000	37.20	26.82	2.81	36.79	30.04	74.00	-43.96	Peak
2890.000	38.83	28.31	3.30	37.23	33.21	74.00	-40.79	Peak
3385.000	36.97	28.91	3.64	37.34	32.18	74.00	-41.82	Peak
9244.000	27.00	37.84	7.75	34.67	37.92	74.00	-36.08	Peak

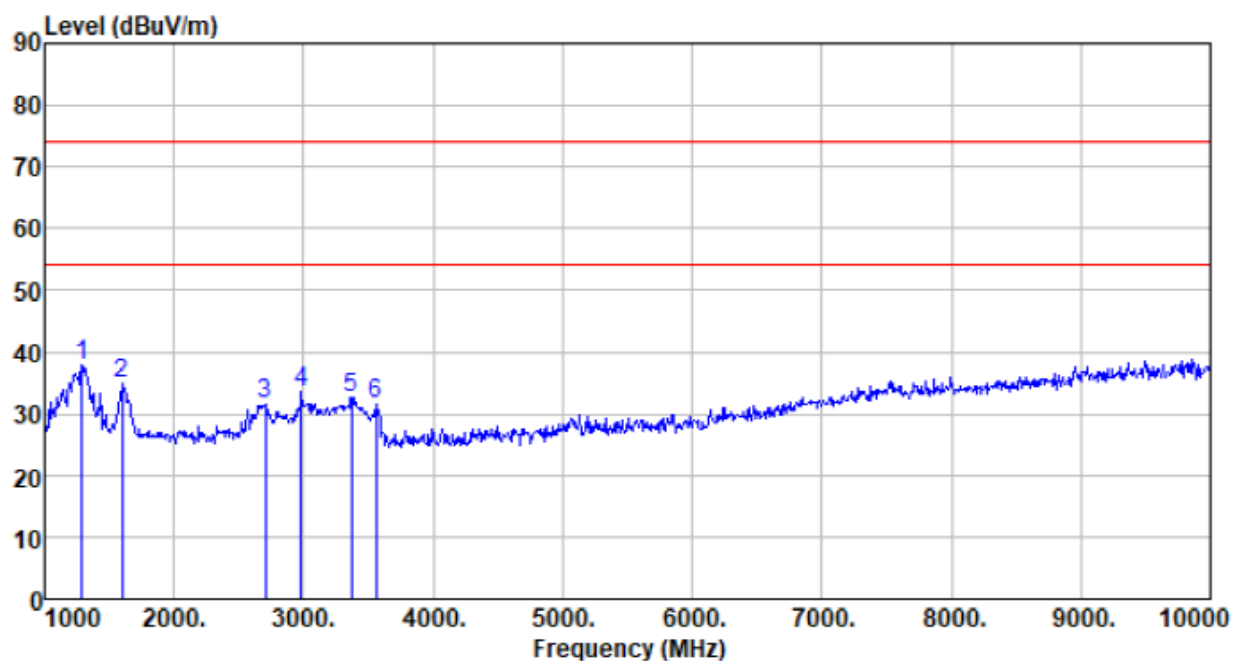


Test channel:	Middle	Polarization:	Horizontal
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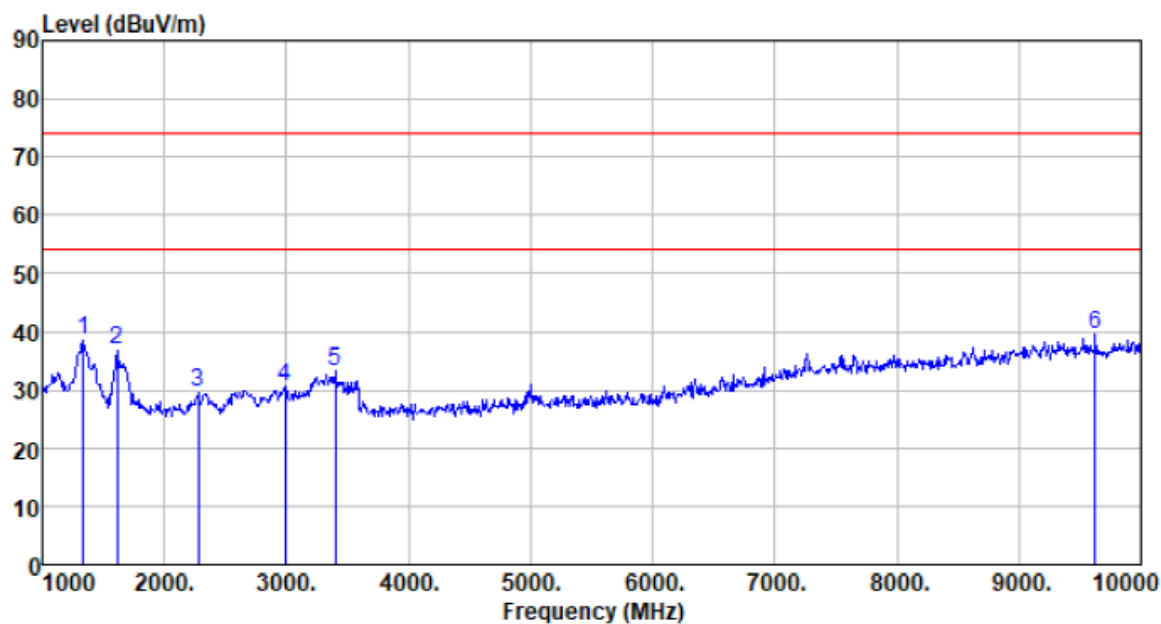
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
1342.000	47.15	24.98	2.21	36.04	38.30	74.00	-35.70	Peak
1621.000	44.89	25.47	2.36	36.26	36.46	74.00	-37.54	Peak
2656.000	37.43	27.71	3.13	37.06	31.21	74.00	-42.79	Peak
3376.000	37.96	28.90	3.64	37.34	33.16	74.00	-40.84	Peak
6679.000	29.45	34.37	5.96	35.91	33.87	74.00	-40.13	Peak
9685.000	28.20	38.27	8.00	34.99	39.48	74.00	-34.52	Peak

Test channel:	Middle	Polarization:	Vertical
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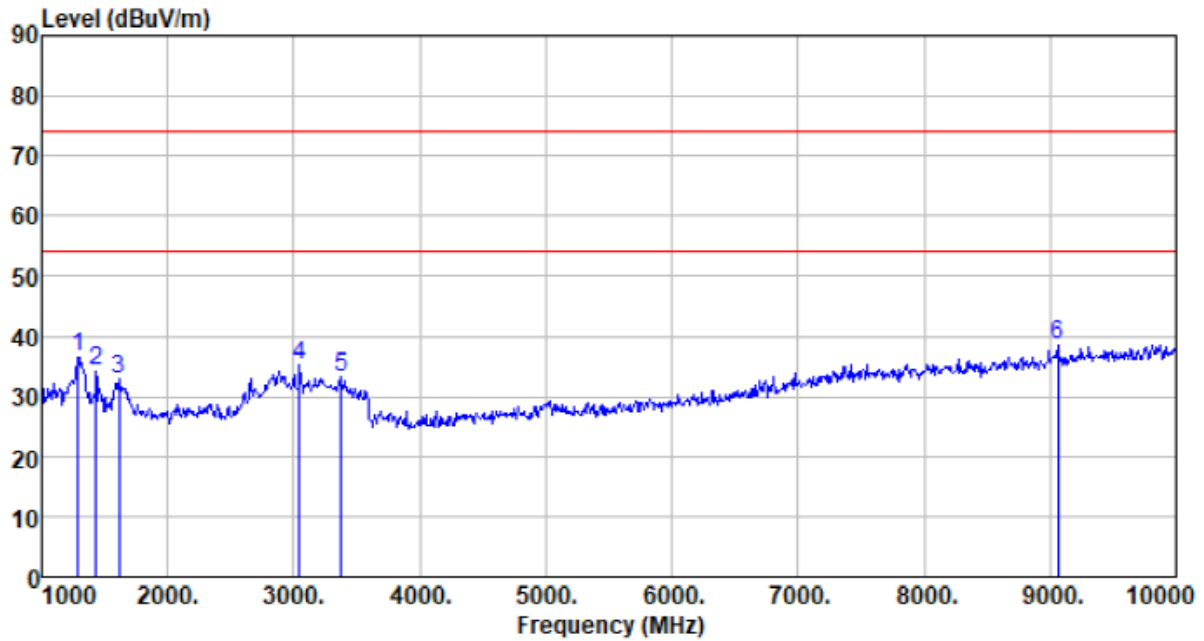
Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
1288.000	46.67	24.88	2.19	35.99	37.75	74.00	-36.25	Peak
1594.000	43.33	25.43	2.33	36.24	34.85	74.00	-39.15	Peak
2701.000	37.65	27.82	3.16	37.09	31.54	74.00	-42.46	Peak
2980.000	38.89	28.55	3.38	37.29	33.53	74.00	-40.47	Peak
3367.000	37.38	28.89	3.63	37.34	32.56	74.00	-41.44	Peak
3556.000	35.98	29.10	3.79	37.36	31.51	74.00	-42.49	Peak

Test channel:	Highest	Polarization:	Horizontal
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
1333.000	47.29	24.97	2.21	36.03	38.44	74.00	-35.56	Peak
1612.000	45.38	25.46	2.34	36.25	36.93	74.00	-37.07	Peak
2278.000	36.69	26.72	2.77	36.76	29.42	74.00	-44.58	Peak
2989.000	35.75	28.57	3.40	37.29	30.43	74.00	-43.57	Peak
3403.000	37.99	28.92	3.64	37.34	33.21	74.00	-40.79	Peak
9622.000	28.34	38.25	7.98	34.94	39.63	74.00	-34.37	Peak

Test channel:	Highest	Polarization:	Vertical
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Freq MHz	Reading level dBuV	Antenna factor dB/m	Cable loss dB	Preamp factor dB	level dBuV/m	Limit level dBuV/m	Over limit dB	Remark
1288.000	45.37	24.88	2.19	35.99	36.45	74.00	-37.55	Peak
1432.000	42.81	25.16	2.25	36.11	34.11	74.00	-39.89	Peak
1612.000	41.32	25.46	2.34	36.25	32.87	74.00	-41.13	Peak
3043.000	40.45	28.63	3.45	37.31	35.22	74.00	-38.78	Peak
3376.000	37.91	28.90	3.64	37.34	33.11	74.00	-40.89	Peak
9064.000	27.95	37.59	7.62	34.56	38.60	74.00	-35.40	Peak

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor

## 8 Test Setup Photo

Reference to the **appendix I** for details.

## 9 EUT Constructional Details

Reference to the **appendix II** for details.

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